

DIVISION 09 - FINISHES  
SECTION 096500 RESILIENT FLOORING

norament<sup>®</sup> system, noraplan<sup>®</sup> system and nora<sup>®</sup> accessories

This document is provided to assist in the preparation of a Project or Master Specification and has been formatted in accordance with the Construction Specifications Institute (CSI)'s MasterFormat<sup>®</sup>.

## PART 1 - GENERAL

### 1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

### 1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
1. Resilient tile flooring for commercial traffic.
  2. Resilient plank flooring for commercial traffic with pre-applied adhesive.
  3. Resilient sheet flooring for commercial traffic.
  4. Resilient sheet flooring for commercial traffic with pre-applied adhesive.
  5. Resilient tile flooring for special fire requirements.
  6. Resilient tile flooring for extra heavy traffic, ice skate, and golf spike resistant.
  7. Resilient tile flooring for pre-installed raised access flooring, or releasable application.
  8. Resilient tile flooring for electrostatic dissipative protection.
  9. Resilient sheet flooring for electrostatic dissipative protection.
  10. Resilient stair treads (one-piece nosing, tread and riser).
  11. Resilient stair accessories.
  12. Resilient wall base, sanitary base, and accessories.
  13. Substrate preparation.
- B. Related Work: The following items are not included in this Section and are specified under the designated Sections:
- |                   |   |
|-------------------|---|
| 1. Section 033000 | CAST-IN-PLACE CONCRETE for concrete substrate; slab surface tolerances; vapor retarder for applications on or below grade; requirement for 83/90 degree riser and tread edge angle for stair tread and nosings. |
| 2. Section 055100 | METAL STAIRS AND RAILINGS; requirement for 83/90 degree riser and tread edge angle for stair tread and nosings.   |
| 3. Section 061000 | ROUGH CARPENTRY for plywood substrate and surface tolerances.   |
| 4. Section 096900 | ACCESS FLOORING for resilient floor covering for access panels.   |
- C. References (Industry Standards):
1. American Association of Textile Chemists and Colorists (AATCC):
    - a. AATCC 134 Electrostatic Propensity of Carpets
  2. American National Standards Institute (ANSI):
    - a. ANSI ESD S97.2 Floor Materials and Footwear – Voltage Measurement on a Person
  3. ASTM International (ASTM):
    - a. ASTM C518 Standard Test Method for Steady State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
    - b. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers – Tension
    - c. ASTM D2047 Standard Test Method for Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine

- d. ASTM D2240 Standard Test Method for Rubber Property – Durometer Hardness
- e. ASTM D3389 Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform, Double Head Abrader)
- f. ASTM D6499 Standard Test Method for the Immunological Measurement of Antigenic Protein in Natural Rubber and its Products
- g. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials
- h. ASTM E648 Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
- i. ASTM E662 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
- j. ASTM E1745 Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs
- k. ASTM E2179 Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors
- l. ASTM E2180 Standard Test Method for Determining the Activity of Incorporated Antimicrobial Agent(s) in Polymeric or Hydrophobic Materials
- m. ASTM F150 Standard Test Method for Electrical Resistance of Conductive and Static Dissipative Resilient Flooring
- n. ASTM F155 Method of Test for Temper of Strip and Sheet Metals for Electronic Devices
- o. ASTM F386 Standard Test Method for Thickness of Resilient Flooring Materials Having Flat Surfaces
- p. ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
- q. ASTM F925 Standard Test Method for Resistance to Chemicals of Resilient Flooring
- r. ASTM F970 Standard Test Method for Static Load Limit
- s. ASTM F1344 Standard Specification for Rubber Floor Tile
- t. ASTM F1482 Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring
- u. ASTM F1514 Standard Test Method for Measuring Heat Stability of Resilient Flooring by Color
- v. ASTM F1515 Standard Test Method for Measuring Light Stability of Resilient Flooring by Color Change
- w. ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing
- x. ASTM F1860 Standard Specification for Rubber Sheet Floor Covering With Backing
- y. ASTM F1861 Standard Specification for Resilient Wall Base
- z. ASTM F2055 Standard Test Method for Size and Squareness of Resilient Floor Tile by Dial Gage Method
- aa. ASTM F2169 Standard Specification for Resilient Stair Treads
- bb. ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
- cc. ASTM F2199 Standard Test Method for Determining Dimensional Stability of Resilient Floor Tile after Exposure to Heat
- dd. ASTM F3010 Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings
- ee. ASTM G21 Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi
- 4. European Norm (FTM):
  - a. FTM 101 C 4046 Static Decay
- 5. International Organization for Standardization (ISO):
  - a. ISO 140 Measurement of sound insulation in buildings and of building elements
- 6. National Fire Protection Association (NFPA):
  - a. NFPA 253 Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Energy Source
  - b. NFPA 258 Test Method for Specific Density of Smoke Generated by Solid Materials

### 1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, installation guide and maintenance guide for each material and accessory proposed for use.
- B. Samples: Submit three representative samples of each product specified for verification.

### 1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Provide resilient flooring manufactured by a firm with a minimum of 10 years' experience with resilient flooring of type equivalent to those specified.
  - 1. Manufacturer's quality management system must have ISO 9001:2000 approval.
  - 2. Provide resilient flooring products, including wall base, accessories and subfloor preparation products from one manufacturer to ensure color matching and compatibility.
  - 3. Manufacturer shall be capable of providing technical training and technical field service representation.
- B. Installer Qualifications: Acceptable to manufacturer of resilient flooring or INSTALL (International Standards & Training Alliance) resilient certified for the requirements of the project.
- C. Sustainable Design Requirements:
  - 1. ISO 14001 Environmental Management Systems certification.
  - 2. Construction waste take back program for the purpose of reducing jobsite waste by taking back uninstalled waste flooring. Details of the nora<sup>®</sup> program are available at [www.nora.com/us](http://www.nora.com/us).
  - 3. Flooring surfaces that are easily cleaned and do not require coatings and stripping, or use chemicals that may be hazardous to human health.
  - 4. Supply all required products that are CA 01350 compliant.
  - 5. Flooring that is free of materials known to be teratogenic, mutagenic or carcinogenic.
  - 6. Flooring that contains no polyvinyl chloride or plasticizers.
  - 7. Flooring that contains no halogens.
  - 8. Flooring that contains no asbestos.

### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in labeled packages. Store and handle in strict compliance with manufacturer's recommendations. Protect from damage due to weather, excessive temperatures, and construction operations.
- B. Deliver materials sufficiently in advance of installation to condition materials to the required temperature for 48-hours prior to installation.

### 1.6 PROJECT CONDITIONS

- A. The installation area must be fully enclosed, weather tight, and climate controlled between 63°F and 75°F and 40% to 60% ambient relative humidity (RH) for at least 48 hours prior, during and 72 hours after installation (do not use gas fueled blowers). Dew point must be avoided. The substrate must be at least 5°F above dew point to be considered acceptable.

### 1.7 WARRANTY

- A. Provide manufacturer's standard limited warranty for wear, defect, bond and conductivity.

## PART 2 - PRODUCTS

### 2.1 ACCEPTABLE MANUFACTURER

- A. Basis-of-Design: nora systems, Inc., 9 Northeastern Blvd., Salem, NH 03079; telephone 800-332-NORA or 603-894-1021; fax 603-894-6615.

## 2.2 RESILIENT TILE FLOORING FOR COMMERCIAL TRAFFIC

## A. Rubber Floor Tile:

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|--|--|
| 1. Product Name:   | <b>norament® 825 round, Article 1902</b>   |
| 2. ASTM Specification:<br>ASTM F1344 Standard Specification for<br>Rubber Floor Tile   | Type IA and Grade 1  |
| 3. Limited Wear Warranty:  | 10 years   |
| 4. Material:   | nora nora® vulcanized rubber vulcanized rubber compound<br>925 with environmentally compatible color pigments that are<br>free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:  | Homogeneous  |
| 6. Color:  | 20 standard colors   |
| 7. Surface:  | Round  |
| 8. Back of Tile:   | Double-sanded smooth   |
| 9. Material Size (ASTM F2055):<br>± 0.018 inches (± 0.45mm) is required                | 19.72 inches by 19.72 inches (501mm by 501mm)  |
| 10. Squareness (ASTM F2055):<br>± 0.010 inches (± 0.254mm) is required                 | Meets requirements   |
| 11. Thickness (ASTM F386):<br>+ 0.015/-0.005 inches (+ 0.381/- 0.127mm)<br>is required | 0.13 inches (3.2mm)  |
| 12. Dimensional Stability (ASTM F2199):<br>≤ 0.15% in both directions is required      | Meets requirements   |
| 13. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required       | NBSIR 75 950, 0.8  |
| 14. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required                           | NBS, 413 (flaming) and 367 (non-flaming)   |
| 15. CAN/ULC-S102.2:  | Surface Burning, FSC1 of 55 and SD of 450  |
| 16. Burn Resistance:   | Resistant to cigarette and solder burns  |
| 17. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                                 | Static coefficient of friction, Neolite dry 0.76, Neolite wet 0.85   |
| 18. Bacteria Resistance (ASTM E2180/ASTM<br>G21):                                      | Resistant to bacteria, fungi, and micro-organism activity  |
| 19. VOC's:   | This flooring is GREENGUARD Gold Certified for Low VOC<br>Emissions and CA 01350 compliant   |
| 20. Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level  |
| 21. Sound Absorption (ISO 140):  | Δ Lw 12 dB (compare only Δ values)   |
| 22. Hardness (ASTM D2240):<br>≥ 85 is required   | Shore type "A", 89   |
| 23. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required               | Residual compression of 0.004 inches with 800 lbs.   |
| 24. Rolling Load Limit:  | ≤ 550 lbs. / sq. inch, with no forklift traffic  |
| 25. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required                | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.005<br>oz. (0.014g) weight loss   |
| 26. Oil & Grease Resistance:   | No   |
| 27. Heat Resistance (ASTM F1514):  | Easily achieved with all batches and regular maintenance   |

Avg.  $\Delta E \leq 8.0$  is required

- 28. Static Generation (AATCC 134): < 2000 Volts at 20% RH
- 29. Cleaning: Cleaned and maintained effectively using water, nora<sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
- 30. Shine: Higher shine achieved by buffing without any artificial topical applied coatings.
- 31. Stain Removal: Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m<sup>2</sup>, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.
- 32. Substrate Preparation: Per ASTM F710 and the nora<sup>®</sup> Installation Guide

**B. Rubber Floor Tile:**

- 33. Product Name: **norament<sup>®</sup> 926 round, Article 0354**
- 34. ASTM Specification: Type IA and Grade 1  
ASTM F1344 Standard Specification for Rubber Floor Tile
- 35. Limited Wear Warranty: 10 years
- 36. Material: nora nora<sup>®</sup> vulcanized rubber vulcanized rubber compound 926 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
- 37. Composition: Homogeneous
- 38. Color: 20 standard colors
- 39. Surface: Round
- 40. Back of Tile: Double-sanded smooth
- 41. Material Size (ASTM F2055): 39.53 inches by 39.53 inches (1004 mm by 1004 mm)  
 $\pm 0.018$  inches ( $\pm 0.45$ mm) is required
- 42. Squareness (ASTM F2055): Meets requirements  
 $\pm 0.010$  inches ( $\pm 0.254$ mm) is required
- 43. Thickness (ASTM F386): 0.16 inches (4.0mm)  
 $+ 0.015/-0.005$  inches ( $+ 0.381/- 0.127$ mm) is required
- 44. Dimensional Stability (ASTM F2199): Meets requirements  
 $\leq 0.15\%$  in both directions is required
- 45. Flammability (E648/NFPA 253): NBSIR 75 950, 1.1  
 $\geq 0.45$  watts/sq. cm for Class 1 is required

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| 46. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required             | NBS, 380 (flaming) and 230 (non-flaming)   |
| 47. CAN/ULC-S102.2:  | Surface Burning, FSC1 of 70 and SD of 470  |
| 48. Burn Resistance:   | Resistant to cigarette and solder burns  |
| 49. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                   | Static coefficient of friction, Neolite dry 0.76, Neolite wet 0.85   |
| 50. Bacteria Resistance (ASTM E2180/ASTM G21):                           | Resistant to bacteria, fungi, and micro-organism activity  |
| 51. VOC's:   | This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant  |
| 52. Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level  |
| 53. Sound Absorption (ISO 140):  | Δ Lw 12 dB (compare only Δ values)   |
| 54. Hardness (ASTM D2240):<br>≥ 70 is required                           | Shore type "A", 82   |
| 55. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.004 inches with 800 lbs.   |
| 56. Rolling Load Limit:  | ≤ 550 lbs. / sq. inch, with no forklift traffic  |
| 57. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.005 oz. (0.014g) weight loss  |
| 58. Oil & Grease Resistance:   | No   |
| 59. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance   |
| 60. Static Generation (AATCC 134):                                       | < 2000 Volts at 20% RH   |
| 61. Cleaning:  | Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.  |
| 62. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.  |
| 63. Stain Removal:   | Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m <sup>2</sup> , pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 64. Substrate Preparation:   | Per ASTM F710 and the nora <sup>®</sup> Installation Guide   |

C. Rubber Floor Tile:

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|------------------------|---|
| 1. Product Name:       | <b>norament<sup>®</sup> arago, Article 3118</b> |
| 2. ASTM Specification: | Type IB and Grade 2                             |

	ASTM F1344 Standard Specification for Rubber Floor Tile	
3.	Limited Wear Warranty:	10 years
4.	Material:	nora <sup>®</sup> vulcanized rubber compound 926 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5.	Composition:	Homogeneous rubber compound with a random scattered design
6.	Color:	12 standard colors
7.	Surface:	Landscape
8.	Back of Tile:	Double-sanded smooth
9.	Material Size (ASTM F2055): ± 0.02 inches (± 0.5mm) by ± 0.018 inch (± 0.45mm) is required	39.53 inches by 19.76 inches (1004mm by 502mm)
10.	Squareness (ASTM F2055): ± 0.010 inches (± 0.254mm) is required	Meets requirements
11.	Thickness (ASTM F386): + 0.015/-0.005 inches (+ 0.381/- 0.127mm) is required	0.14 inches (3.5mm)
12.	Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
13.	Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.92
14.	Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 267 (flaming) and 130 (non-flaming)
15.	CAN/ULC-S102.2:	Surface Burning, FSC1 of 75 and SD of 470
16.	Burn Resistance:	Resistant to cigarette and solder burns
17.	Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.81, Neolite wet 0.87 (not recommended for ramps)
18.	Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
19.	VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
20.	Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
21.	Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 15, Δ Lw 10dB (compare only Δ values)
22.	Hardness (ASTM D2240): ≥ 70 is required	Shore type "A", 82
23.	Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.004 inches with 800 lbs.
24.	Rolling Load Limit:	≤ 850 lbs. / sq. inch; for fork lift traffic nora <sup>®</sup> polyurethane adhesive is required
25.	Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss
26.	Oil & Grease Resistance:	Yes
27.	Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
28.	Static Generation (AATCC 134):	< 2000 Volts at 20% RH

- 29. Thermal Transmission (ASTM C518): R-value of -0.90
- 30. Cleaning: Cleaned and maintained effectively using water, nora<sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
- 31. Stain Removal: Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m<sup>2</sup>, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.
- 32. Substrate Preparation: Per ASTM F710 and the nora<sup>®</sup> Installation Guide

D. Rubber Floor Tile:

- 1. Product Name: **norament<sup>®</sup> grano, Article 1880**
- 2. ASTM Specification: Type IB and Grade 2  
ASTM F1344 Standard Specification for Rubber Floor Tile
- 3. Limited Wear Warranty: 10 years
- 4. Material: nora<sup>®</sup> vulcanized rubber compound 926 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
- 5. Composition: Homogeneous rubber compound with a random scattered design
- 6. Color: 32 standard colors
- 7. Surface: Hammered
- 8. Back of Tile: Double-sanded smooth
- 9. Material Size (ASTM F2055): 39.53 inches by 39.53 inches (1004mm by 1004mm)  
± 0.02 inches (± 0.5mm) is required
- 10. Squareness (ASTM F2055): Meets requirements  
± 0.010 inches (± 0.254mm) is required
- 11. Thickness(ASTM F386): 0.14 inches (3.5mm)  
+ 0.015/-0.005 inches (+ 0.381/- 0.127mm) is required
- 12. Dimensional Stability (ASTM F2199): Meets requirements  
≤ 0.15% in both directions is required
- 13. Flammability(E648/NFPA 253): NBSIR 75 950, 0.92  
≥ 0.45 watts/sq. cm for Class 1 is required
- 14. Smoke Density(ASTM E662/NFPA 258): NBS, 267 (flaming) and 130 (non-flaming)  
< 450 is required
- 15. CAN/ULC-S102.2: Surface Burning, FSC1 of 70 and SD of 470



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|---|--|
| 16. Burn Resistance:  | Resistant to cigarette and solder burns  |
| 17. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                  | Static coefficient of friction, Neolite dry 0.99, Neolite wet 0.95 (not recommended for ramps)   |
| 18. Bacteria Resistance(ASTM E2180/ASTM G21):                           | Resistant to bacteria, fungi, and micro-organism activity  |
| 19. VOC's:  | This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant  |
| 20. Latex Allergies(ASTM D6499):  | Inhibition Elisa, results are below detection level  |
| 21. Sound Absorption(ASTM E2179/ISO 140):                               | Δ IIC 11, Δ Lw 11 dB (compare only Δ values)   |
| 22. Sound Generation:   | 66.3 dBA, 68.5 dBC and 19.6 Sones, Independently tested  |
| 23. Hardness(ASTM D2240):<br>≥ 70 is required                           | Shore type "A", 82   |
| 24. Static Load(ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.005 inches with 800 lbs.   |
| 25. Rolling Load Limit:   | ≤ 850 lbs. / sq. inch; for fork lift traffic nora <sup>®</sup> polyurethane adhesive is required   |
| 26. Abrasion Resistance(ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.002 oz. (0.05g) weight loss   |
| 27. Oil & Grease Resistance:  | Yes  |
| 28. Heat Resistance(ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance   |
| 29. Static Generation(AATCC 134):                                       | < 2000 Volts at 20% RH   |
| 30. Thermal Transmission (ASTM C518):                                   | R-value of -0.90   |
| 31. Cleaning:   | Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.  |
| 32. Shine:  | Higher shine achieved by buffing without any artificial topical applied coatings.  |
| 33. Stain Removal:  | Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m <sup>2</sup> , pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 34. Substrate Preparation:  | Per ASTM F710 and the nora <sup>®</sup> Installation Guide   |

E. Rubber Floor Tile:

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|------------------------|--|
| 1. Product Name:       | <b>norament<sup>®</sup> hammered, Article 1910</b> |
| 2. ASTM Specification: | Type IA and Grade 1                                |

	ASTM F1344 Standard Specification for Rubber Floor Tile	
3.	Limited Wear Warranty:	10 years
4.	Material:	nora <sup>®</sup> vulcanized rubber compound xp with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5.	Composition:	Homogeneous
6.	Color:	5 standard colors
7.	Surface:	Hammered
8.	Back of Tile:	Double-sanded smooth
9.	Material Size (ASTM F2055): ± 0.018 inches (± 0.45mm) is required	19.76 inches by 19.76 inches (502mm by 502mm)
10.	Squareness (ASTM F2055): ± 0.010 inches (± 0.254mm) is required	Meets requirements
11.	Thickness (ASTM F386): + 0.015/-0.005 inches (+ 0.381/- 0.127mm) is required	0.11 inches (2.7mm)
12.	Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
13.	Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.87
14.	Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 162 (flaming) and 208 (non-flaming)
15.	CAN/ULC-S102.2:	Surface Burning, FSC1 of 55 and SD of 450
16.	Burn Resistance:	Resistant to cigarette and solder burns
17.	Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.90, Neolite wet 1.0
18.	Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
19.	VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant
20.	Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
21.	Sound Absorption (ISO 140):	Δ Lw 9 dB (compare only Δ values)
22.	Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 89
23.	Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.005 inches with 800 lbs.
24.	Rolling Load Limit:	≤ 550 lbs. / sq. inch, with no forklift traffic
25.	Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.006 oz. (0.16g) weight loss
26.	Oil & Grease Resistance:	No
27.	Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
28.	Static Generation (AATCC 134):	< 2000 Volts at 20% RH
29.	Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any

factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.

30. Shine:

Higher shine achieved by buffing without any artificial topical applied coatings.

31. Stain Removal:

Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m<sup>2</sup>, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.

32. Substrate Preparation:

Per ASTM F710 and the nora<sup>®</sup> Installation Guide

F. Rubber Floor Tile:

1. Product Name:

**norament<sup>®</sup> satura, Article 1880**

2. ASTM Specification:  
ASTM F1344 Standard Specification for Rubber Floor Tile

Type IB and Grade 2

3. Limited Wear Warranty:

10 years

4. Material:

nora<sup>®</sup> vulcanized rubber compound 926 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury

5. Composition:

Homogeneous rubber compound with a random scattered design

6. Color:

32 standard colors

7. Surface:

Hammered

8. Back of Tile:

Double-sanded smooth

9. Material Size (ASTM F2055):  
± 0.02 inches (± 0.5mm) is required

39.53 inches by 39.53 inches (1004mm by 1004mm)

10. Squareness (ASTM F2055):  
± 0.010 inches (± 0.254mm) is required

Meets requirements

11. Thickness (ASTM F386):  
+ 0.015/-0.005 inches (+ 0.381/- 0.127mm) is required

0.14 inches (3.5mm)

12. Dimensional Stability (ASTM F2199):  
≤ 0.15% in both directions is required

Meets requirements

13. Flammability (E648/NFPA 253):  
≥ 0.45 watts/sq. cm for Class 1 is required

NBSIR 75 950, 0.92

14. Smoke Density (ASTM E662/NFPA 258):  
< 450 is required

NBS, 267 (flaming) and 130 (non-flaming)

15. CAN/ULC-S102.2:

Surface Burning, FSC1 of 70 and SD of 470, achieved

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|--|--|
| 16. Burn Resistance:   | Resistant to cigarette and solder burns  |
| 17. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                   | Static coefficient of friction, Neolite dry 0.99, Neolite wet 0.95 (not recommended for ramps)   |
| 18. Bacteria Resistance (ASTM E2180/ASTM G21):                           | Resistant to bacteria, fungi, and micro-organism activity  |
| 19. VOC's:   | This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant  |
| 20. Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level  |
| 21. Sound Absorption (ASTM E2179/ISO 140):                               | Δ IIC 11, Δ Lw 11 dB (compare only Δ values)   |
| 22. Sound Generation:  | 66.3 dBA, 68.5 dBC and 19.6 Sones, Independently tested  |
| 23. Hardness (ASTM D2240):<br>≥ 70 is required                           | Shore type "A", 82   |
| 24. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.005 inches with 800 lbs.   |
| 25. Rolling Load Limit:  | ≤ 850 lbs. / sq. inch; for fork lift traffic nora <sup>®</sup> polyurethane adhesive is required   |
| 26. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.002 oz. (0.05g) weight loss   |
| 27. Oil & Grease Resistance:   | Yes  |
| 28. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance   |
| 29. Static Generation (AATCC 134):                                       | < 2000 Volts at 20% RH   |
| 30. Thermal Transmission (ASTM C518):                                    | R-value of -0.90   |
| 31. Cleaning:  | Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.  |
| 32. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.  |
| 33. Stain Removal:   | Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m <sup>2</sup> , pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 34. Substrate Preparation:   | Per ASTM F710 and the nora <sup>®</sup> Installation Guide   |

G. Rubber Floor Tile:

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|------------------------|--|
| 1. Product Name:       | <b>norament<sup>®</sup> xp, Article 1880</b> |
| 2. ASTM Specification: | Type IB and Grade 1                          |

	ASTM F1344 Standard Specification for Rubber Floor Tile	
3.	Limited Wear Warranty:	10 years
4.	Material:	nora <sup>®</sup> vulcanized rubber compound xp with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5.	Composition:	Homogeneous
6.	Color:	16 standard colors
7.	Surface:	Hammered
8.	Back of Tile:	Double-sanded smooth
9.	Material Size (ASTM F2055): ± 0.02 inches (± 0.5mm) is required	39.53 inches by 39.53 inches (1004mm by 1004mm)
10.	Squareness (ASTM F2055): ± 0.010 inches (± 0.254mm) is required	Meets requirements
11.	Thickness (ASTM F386): + 0.015/-0.005 inches (+ 0.381/- 0.127mm) is required	0.14 inches (3.5mm)
12.	Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
13.	Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.71
14.	Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 423 (flaming) and 290 (non-flaming)
15.	CAN/ULC-S102.2:	Surface Burning, FSC1 of 55 and SD of 450
16.	Burn Resistance:	Resistant to cigarette and solder burns
17.	Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.90 Neolite wet 1.0
18.	Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
19.	VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant
20.	Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
21.	Sound Absorption (ASTM E2179):	Δ IIC 15 (compare only Δ values)
22.	Hardness (ASTM D2240): ≥ 70 is required	Shore type "A", 89
23.	Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.002 inches with 800 lbs.
24.	Rolling Load Limit:	≤ 850 lbs. / sq. inch; for fork lift traffic nora <sup>®</sup> polyurethane adhesive is required
25.	Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.005 oz. (0.13g) weight loss
26.	Oil & Grease Resistance:	No
27.	Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
28.	Static Generation (AATCC 134):	< 2000 Volts at 20% RH
29.	Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads

and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.

- 30. Shine: Higher shine achieved by buffing without any artificial topical applied coatings.
- 31. Stain Removal: Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m<sup>2</sup>, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.
- 32. Substrate Preparation: Per ASTM F710 and the nora<sup>®</sup> Installation Guide

H. Rubber Floor Tile:

- 1. Product Name: **norament<sup>®</sup> xp trac, Article 325**
- 2. ASTM Specification: Type IB and Grade 1  
ASTM F1344 Standard Specification for Rubber Floor Tile
- 3. Limited Wear Warranty: 10 years
- 4. Material: nora<sup>®</sup> vulcanized rubber compound xp with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
- 5. Composition: Homogeneous
- 6. Color: 6 standard colors
- 7. Surface: A granular design with an enhanced surface profile
- 8. Back of Tile: Double-sanded smooth
- 9. Material Size (ASTM F2055): 39.53 inches by 39.53 inches (1004mm by 1004mm)  
± 0.02 inches (± 0.5mm) is required
- 10. Squareness (ASTM F2055): Meets requirements  
± 0.010 inches (± 0.254mm) is required
- 11. Thickness (ASTM F386): 0.14 inches (3.5mm)  
+ 0.015/-0.005 inches (+ 0.381/- 0.127mm) is required
- 12. Dimensional Stability (ASTM F2199): Meets requirements  
≤ 0.15% in both directions is required
- 13. Flammability (E648/NFPA 253): NBSIR 75 950, 0.68  
≥ 0.45 watts/sq. cm for Class 1 is required
- 14. Smoke Density (ASTM E662/NFPA 258): NBS, 372 (flaming) and 284 (non-flaming)  
< 450 is required
- 15. CAN/ULC-S102.2: Surface Burning, FSC1 of 55 and SD of 545

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|--|--|
| 16. Burn Resistance:   | Resistant to cigarette and solder burns  |
| 17. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                   | Static coefficient of friction, Neolite dry 0.99, Neolite wet 0.98   |
| 18. Bacteria Resistance (ASTM E2180/ASTM G21):                           | Resistant to bacteria, fungi, and micro-organism activity  |
| 19. VOC's:   | This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant  |
| 20. Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level  |
| 21. Sound Absorption (ASTM E2179):                                       | Δ IIC 15 (compare only Δ values)   |
| 22. Hardness (ASTM D2240):<br>≥ 70 is required                           | Shore type "A", 89 achieved  |
| 23. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.005 inches with 800 lbs.   |
| 24. Rolling Load Limit:  | ≤ 850 lbs. / sq. inch; for fork lift traffic nora <sup>®</sup> polyurethane adhesive is required   |
| 25. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.005 oz. (0.13g) weight loss   |
| 26. Oil & Grease Resistance:   | No   |
| 27. Heat Resistance:<br>Avg. ΔE ≤ 8.0 is required                        | Easily achieved with all batches and regular maintenance   |
| 28. Static Generation (AATCC 134):                                       | < 2000 Volts at 20% RH   |
| 29. Cleaning:  | Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.  |
| 30. Stain Removal:   | Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m <sup>2</sup> , pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 31. Substrate Preparation:   | Per ASTM F710 and the nora <sup>®</sup> Installation Guide   |

I. Rubber Floor Tile:

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|---|---|
| 1. Product Name:  | <b>noraplan<sup>®</sup> eco, Article 2490</b>   |
| 2. ASTM Specification:<br>ASTM F1344 Standard Specification for Rubber Floor Tile | Type I and Grade 1  |
| 3. Limited Wear Warranty:   | 5 years   |
| 4. Material:  | nora <sup>®</sup> vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals |

	like lead, cadmium or mercury
5. Composition:	Homogeneous rubber compound with a random scattered design
6. Color:	16 standard colors
7. Surface:	Smooth
8. Back of Tile:	Double-sanded smooth
9. Material Size (ASTM F2055): ± 0.018 (± 0.45mm) is required	24.015 inches by 24.015 inches (610mm by 610mm)
10. Squareness (ASTM F2055): ± 0.018 inches (± 0.45mm) is required	Meets requirements
11. Thickness (ASTM F386): ± 0.005 inches (± 0.127mm) is required	0.08 inches (2mm)
12. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
13. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.97
14. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 196 (flaming) and 207 (non-flaming)
15. CAN/ULC-S102.2:	Surface Burning, FSC1 of 125 and SD of 370
16. Burn Resistance:	Resistant to cigarette and solder burns
17. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.90 (not recommended for ramps)
18. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
19. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
20. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
21. Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 11, Δ Lw 8 dB (compare only Δ values)
22. Sound Generation:	67.9 dBA, 69.9 dBC and 22 Sones, Independently tested
23. Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
24. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
25. Rolling Load Limit:	≤ 450 lbs. / sq. inch, with no forklift traffic
26. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss
27. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 913.1 lbs. per sq. inch
28. Oil & Grease Resistance:	No
29. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
30. Light Resistance: Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
31. Static Generation (AATCC 134):	< 2000 Volts at 20% RH
32. Thermal Transmission (ASTM C518):	R-value of 0.04
33. Cleaning:	Cleaned and maintained effectively using water, nora® pads



and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.

- 34. Shine: Higher shine achieved by buffing without any artificial topical applied coatings.
- 35. Stain Removal: Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.
- 36. Substrate Preparation: Per ASTM F710 and the nora® Installation Guide

J. Rubber Floor Tile:

- 1. Product Name: **noraplan environcare™ 2.0 mm, Article 2462**
- 2. ASTM Specification: Type I and Grade 1  
ASTM F1344 Standard Specification for Rubber Floor Tile
- 3. Limited Wear Warranty: 5 years
- 4. Material: nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
- 5. Composition: Homogeneous rubber compound with a random scattered design
- 6. Color: 48 standard colors
- 7. Surface: Smooth
- 8. Back of Tile: Double-sanded smooth
- 9. Material Size (ASTM F2055): 24.015 inches by 24.015 inches (610mm by 610mm)  
± 0.018 (± 0.45mm) is required
- 10. Squareness (ASTM F2055): Meets requirements  
± 0.018 inches (± 0.45mm) is required
- 11. Thickness (ASTM F386): 0.08 inches (2mm)  
± 0.005 inches (± 0.127mm) is required
- 12. Dimensional Stability (ASTM F2199): Meets requirements  
≤ 0.15% in both directions is required
- 13. Flammability (E648/NFPA 253): NBSIR 75 950, 0.97  
≥ 0.45 watts/sq. cm for Class 1 is required
- 14. Smoke Density (ASTM E662/NFPA 258): NBS, 196 (flaming) and 207 (non-flaming)  
< 450 is required
- 15. CAN/ULC-S102.2: Surface Burning, FSC1 of 125 and SD of 370

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|--|---|
| 16. Burn Resistance:   | Resistant to cigarette and solder burns   |
| 17. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                   | Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.90 (not recommended for ramps)  |
| 18. Bacteria Resistance (ASTM E2180/ASTM G21):                           | Resistant to bacteria, fungi, and micro-organism activity   |
| 19. VOC's:   | This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant   |
| 20. Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level   |
| 21. Sound Absorption (ASTM E2179/ISO 140):                               | Δ IIC 11, Δ Lw 8 dB (compare only Δ values)   |
| 22. Sound Generation:  | 67.9 dBA, 69.9 dBC and 22 Sones, Independently tested   |
| 23. Hardness (ASTM D2240):<br>≥ 85 is required                           | Shore type "A", 92  |
| 24. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.003 inches with 800 lbs.  |
| 25. Rolling Load Limit:  | ≤ 450 lbs. / sq. inch, with no forklift traffic   |
| 26. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss  |
| 27. Elongation (ASTM D412):<br>≥ 300 lbs. per sq. inch is required       | Modulus @ 10% is 913.1 lbs. per sq. inch  |
| 28. Oil & Grease Resistance:   | No  |
| 29. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance  |
| 30. Light Resistance:<br>Avg. ΔE ≤ 8.0 is required                       | Easily achieved with all batches and regular maintenance  |
| 31. Static Generation (AATCC 134):                                       | < 2000 Volts at 20% RH  |
| 32. Thermal Transmission (ASTM C518):                                    | R-value of 0.04   |
| 33. Cleaning:  | Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 34. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.   |
| 35. Stain Removal:   | Samples of the product shall be provided for stain removal testing by the owner. Sample size shall be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples shall have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing shall consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period shall be no less than one week. Removal of chemicals shall be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 36. Substrate Preparation:   | Per ASTM F710 and the nora® Installation Guide  |

## K. Rubber Floor Tile:

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|--|---|
| 1. Product Name:   | <b>noraplan environcare™ 3.0 mm, Article 2463</b>   |
| 2. ASTM Specification:<br>ASTM F1344 Standard Specification for<br>Rubber Floor Tile | Type I and Grade 1  |
| 3. Limited Wear Warranty:  | 5 years   |
| 4. Material:   | nora® vulcanized rubber compound 913 with environmentally<br>compatible color pigments that are free of toxic heavy metals<br>like lead, cadmium or mercury |
| 5. Composition:  | Homogeneous rubber compound with a random scattered<br>design   |
| 6. Color:  | 48 standard colors  |
| 7. Surface:  | Smooth  |
| 8. Back of Tile:   | Double-sanded smooth  |
| 9. Material Size (ASTM F2055):<br>± 0.018 (± 0.45mm) is required                     | 24.015 inches by 24.015 inches (610mm by 610mm)   |
| 10. Squareness (ASTM F2055):<br>± 0.018 inches (± 0.45mm) is required                | Meets requirements  |
| 11. Thickness (ASTM F386):<br>± 0.005 inches (± 0.127mm) is required                 | 0.12 inches (3mm)   |
| 12. Dimensional Stability (ASTM F2199):<br>≤ 0.15% in both directions is required    | Meets requirements  |
| 13. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required     | NBSIR 75 950, 1.03  |
| 14. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required                         | NBS, 376 (flaming) and 256 (non-flaming)  |
| 15. CAN/ULC-S102.2:  | Surface Burning, FSC1 of 125 and SD of 370  |
| 16. Burn Resistance:   | Resistant to cigarette and solder burns   |
| 17. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                               | Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.91<br>(not recommended for ramps)   |
| 18. Bacteria Resistance (ASTM E2180/ASTM<br>G21):                                    | Resistant to bacteria, fungi, and micro-organism activity   |
| 19. VOC's:   | This flooring is GREENGUARD Gold Certified for Low VOC<br>Emissions, Blue Angel Certified and CA 01350 compliant  |
| 20. Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level   |
| 21. Sound Absorption (ASTM E2179/ISO 140):   | Δ IIC 14, Δ Lw 10 dB (compare only Δ values)  |
| 22. Sound Generation:  | 67.2 dBA, 68.9 dBC and 20.9 Sones, Independently tested   |
| 23. Hardness (ASTM D2240):<br>≥ 85 is required                                       | Shore type "A", 92  |
| 24. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required             | Residual compression of 0.003 inches with 800 lbs.  |
| 25. Rolling Load Limit:  | ≤ 550 lbs. / sq. inch, with no forklift traffic   |
| 26. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required              | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.003<br>oz. (0.09g) weight loss   |
| 27. Elongation (ASTM D412):<br>≥ 300 lbs. per sq. inch is required                   | Modulus @ 10% is 1,299.0 lbs. per sq. inch  |

28. Oil & Grease Resistance:	No
29. Heat Resistance (ASTM F1514): Avg. $\Delta E \leq 8.0$ is required	Easily achieved with all batches and regular maintenance
30. Light Resistance: Avg. $\Delta E \leq 8.0$ is required	Easily achieved with all batches and regular maintenance
31. Static Generation (AATCC 134):	< 2000 Volts at 20% RH
32. Thermal Transmission (ASTM C518):	R-value of 0.04
33. Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
34. Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
35. Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.
36. Substrate Preparation:	Per ASTM F710 and the nora <sup>®</sup> Installation Guide
<b>L. Rubber Floor Tile:</b>	
1. Product Name:	<b>noraplan<sup>®</sup> Iona 2.0 mm, Article 266B</b>
2. ASTM Specification: ASTM F1344 Standard Specification for Rubber Floor Tile	Type I and Grade 1
3. Limited Wear Warranty:	5 years
4. Material:	nora <sup>®</sup> vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5. Composition:	Heterogeneous rubber compound
6. Color:	24 standard colors
7. Surface:	Textured
8. Back of Tile:	Double-sanded smooth
9. Material Size (ASTM F2055): $\pm 0.018$ inches ( $\pm 0.45$ mm) is required	24.015 inches by 24.015 inches (610mm by 610mm)
10. Squareness (ASTM F2055): $\pm 0.018$ inches ( $\pm 0.45$ mm) is required	Meets requirements
11. Thickness (ASTM F386):	0.08 inches (2mm)

	± 0.005 inches (± 0.127mm) is required	
12.	Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
13.	Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950,0.93
14.	Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 152 (flaming) and 186 (non-flaming)
15.	CAN/ULC-S102.2:	Surface Burning, FSC1 of 125 and SD of 370
16.	Burn Resistance:	Resistant to cigarette and solder burns
17.	Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.92 Neolite wet 0.91 (not recommended for ramps)
18.	Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi and micro-organism activity
19.	VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
20.	Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
21.	Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 11, Δ Lw 8dB (compare only Δ values)
22.	Sound Generation:	67.9 dBA, 69.9 dBC and 22 Sones, Independently tested
23.	Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
24.	Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
25.	Rolling Load Limit:	≤ 450 lbs. / sq. inch, with no forklift traffic
26.	Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss
27.	Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 913.1 lbs. per sq. inch
28.	Oil & Grease Resistance:	No
29.	Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
30.	Light Resistance (ASTM F1515): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
31.	Static Generation (AATCC 134/ANSI ESD S97.2):	< 2000 Volts at 20% RH
32.	Thermal Transmission (ASTM C518):	R-value of 0.04
33.	Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
34.	Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of

application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.

35. Substrate Preparation:

Per ASTM F710 and the nora® Installation Guide

M. Rubber Floor Tile:

- |   |   |
|---|---|
| 1. Product Name:  | <b>noraplan® Iona 3.0 mm, Article 267B</b>  |
| 2. ASTM Specification:<br>ASTM F1344 Standard Specification for Rubber Floor Tile | Type I Grade 1  |
| 3. Limited Wear Warranty:   | 5 years   |
| 4. Material:  | nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Heterogeneous rubber compound   |
| 6. Color:   | 24 standard colors  |
| 7. Surface:   | Textured  |
| 8. Back of Tile:  | Double-sanded smooth  |
| 9. Material Size (ASTM F2055):<br>± 0.018 inches (± 0.45mm) is required           | 24.015 inches by 24.015 inches (610mm by 610mm)   |
| 10. Squareness (ASTM F2055):<br>± 0.018 inches (± 0.45mm) is required             | Meets requirements  |
| 11. Thickness (ASTM F386):<br>± 0.005 inches (± 0.127mm) is required              | 0.12 inches (3mm)   |
| 12. Dimensional Stability (ASTM F2199):<br>≤ 0.15% in both directions is required | Meets requirements  |
| 13. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required  | NBSIR 75 950, 1.09  |
| 14. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required                      | NBS, 150 (flaming) and 246 (non-flaming)  |
| 15. CAN/ULC-S102.2:   | Surface Burning, FSC1 of 125 and SD of 370  |
| 16. Burn Resistance:  | Resistant to cigarette and solder burns   |
| 17. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                            | Static coefficient of friction, Neolite dry 0.97, Neolite wet 0.94 (not recommended for ramps)  |
| 18. Bacteria Resistance (ASTM E2180/ASTM G21):                                    | Resistant to bacteria, fungi and micro-organism activity  |
| 19. VOC's:  | This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant   |
| 20. Latex Allergies (ASTM D6499):   | Inhibition Elisa, results are below detection level   |
| 21. Sound Absorption (ASTM E2179/ISO 140):  | Δ IIC 14, Δ Lw 10dB (compare only Δ values)   |
| 22. Sound Generation:   | 67.2 dBA, 68.9 dBC and 20.9 Sones, Independently tested   |
| 23. Hardness (ASTM D2240):<br>≥ 85 is required                                    | Shore type "A", 92  |

- |  |   |
|--|---|
| 24. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.003 inches with 800 lbs.  |
| 25. Rolling Load Limit:  | ≤ 550 lbs. / sq. inch, with no forklift traffic   |
| 26. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.003 oz. (0.09g) weight loss  |
| 27. Elongation (ASTM D412):<br>≥ 300 lbs. per sq. inch is required       | Modulus @ 10% is 1,299.0 lbs. per sq. inch  |
| 28. Oil & Grease Resistance:   | No  |
| 29. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance  |
| 30. Light Resistance (ASTM F1515):<br>Avg. ΔE ≤ 8.0 is required          | Easily achieved with all batches and regular maintenance  |
| 31. Static Generation (AATCC 134/ANSI ESD S97.2):                        | < 2000 Volts at 20% RH  |
| 32. Thermal Transmission (ASTM C518):                                    | R-value of 0.04   |
| 33. Cleaning:  | Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 34. Stain Removal:   | Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 35. Substrate Preparation:   | Per ASTM F710 and the nora® Installation Guide  |

N. Rubber Floor Tile:

- |   |   |
|---|---|
| 1. Product Name:  | <b>noraplan® sentica 2.0 mm, Article 2700</b>   |
| 2. ASTM Specification:<br>ASTM F1344 Standard Specification for Rubber Floor Tile | Type I and Grade 1  |
| 3. Limited Wear Warranty:   | 5 years   |
| 4. Material:  | nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous rubber compound with a random scattered design  |
| 6. Color:   | 38 standard colors  |

7. Surface:	Smooth
8. Back of Tile:	Double-sanded smooth
9. Material Size (ASTM F2055): ± 0.018 (± 0.45mm) is required	24.015 inches by 24.015 inches (610mm by 610mm)
10. Squareness (ASTM F2055): ± 0.018 inches (± 0.45mm) is required	Meets requirements
11. Thickness (ASTM F386): ± 0.005 inches (± 0.127mm) is required	0.08 inches (2mm)
12. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
13. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.97
14. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 196 (flaming) and 207 (non-flaming)
15. CAN/ULC-S102.2:	Surface Burning, FSC1 of 125 and SD of 370
16. Burn Resistance:	Resistant to cigarette and solder burns
17. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.90 (not recommended for ramps)
18. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
19. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
20. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
21. Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 11, Δ Lw 8 dB (compare only Δ values)
22. Sound Generation:	67.9 dBA, 69.9 dBC and 22 Sones, Independently tested
23. Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
24. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
25. Rolling Load Limit:	≤ 450 lbs. / sq. inch, with no forklift traffic
26. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss
27. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 913.1 lbs. per sq. inch
28. Oil & Grease Resistance:	No
29. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
30. Light Resistance: Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
31. Static Generation (AATCC 134):	< 2000 Volts at 20% RH
32. Thermal Transmission (ASTM C518):	R-value of 0.04
33. Cleaning:	Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product



	specific details.
34. Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
35. Stain Removal:	Samples of the product shall be provided for stain removal testing by the owner. Sample size shall be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples shall have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing shall consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period shall be no less than one week. Removal of chemicals shall be in accordance with manufacturers published cleaning and maintenance recommendations.
36. Substrate Preparation:	Per ASTM F710 and the nora <sup>®</sup> Installation Guide
O. Rubber Floor Tile:	
1. Product Name:	<b>noraplan<sup>®</sup> sentica 3.0 mm, Article 2701</b>
2. ASTM Specification: ASTM F1344 Standard Specification for Rubber Floor Tile	Type I and Grade 1
3. Limited Wear Warranty:	5 years
4. Material:	nora <sup>®</sup> vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5. Composition:	Homogeneous rubber compound with a random scattered design
6. Color:	38 standard colors
7. Surface:	Smooth
8. Back of Tile:	Double-sanded smooth
9. Material Size (ASTM F2055): ± 0.018 (± 0.45mm) is required	24.015 inches by 24.015 inches (610mm by 610mm)
10. Squareness (ASTM F2055): ± 0.018 inches (± 0.45mm) is required	Meets requirements
11. Thickness (ASTM F386): ± 0.005 inches (± 0.127mm) is required	0.12 inches (3mm)
12. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
13. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 1.03
14. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 376 (flaming) and 256 (non-flaming)
15. CAN/ULC-S102.2:	Surface Burning, FSC1 of 125 and SD of 370
16. Burn Resistance:	Resistant to cigarette and solder burns
17. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.91 (not recommended for ramps)
18. Bacteria Resistance (ASTM E2180/ASTM	Resistant to bacteria, fungi, and micro-organism activity

G21):

- |  |   |
|--|---|
| 19. VOC's:   | This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant   |
| 20. Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level   |
| 21. Sound Absorption (ASTM E2179/ISO 140):                               | $\Delta$ IIC 14, $\Delta$ Lw 10 dB (compare only $\Delta$ values)   |
| 22. Sound Generation:  | 67.2 dBA, 68.9 dBC and 20.9 Sones, Independently tested   |
| 23. Hardness (ASTM D2240):<br>≥ 85 is required                           | Shore type "A", 92  |
| 24. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.003 inches with 800 lbs.  |
| 25. Rolling Load Limit:  | ≤ 550 lbs. / sq. inch, with no forklift traffic   |
| 26. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.003 oz. (0.09g) weight loss  |
| 27. Elongation (ASTM D412):<br>≥ 300 lbs. per sq. inch is required       | Modulus @ 10% is 1,299.0 lbs. per sq. inch  |
| 28. Oil & Grease Resistance:   | No  |
| 29. Heat Resistance (ASTM F1514):<br>Avg. $\Delta$ E ≤ 8.0 is required   | Easily achieved with all batches and regular maintenance  |
| 30. Light Resistance:<br>Avg. $\Delta$ E ≤ 8.0 is required               | Easily achieved with all batches and regular maintenance  |
| 31. Static Generation (AATCC 134):                                       | < 2000 Volts at 20% RH  |
| 32. Thermal Transmission (ASTM C518):                                    | R-value of 0.04   |
| 33. Cleaning:  | Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 34. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.   |
| 35. Stain Removal:   | Samples of the product shall be provided for stain removal testing by the owner. Sample size shall be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples shall have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing shall consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period shall be no less than one week. Removal of chemicals shall be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 36. Substrate Preparation:   | Per ASTM F710 and the nora <sup>®</sup> Installation Guide  |

P. Rubber Floor Tile:

- |                        |   |
|------------------------|---|
| 1. Product Name:       | <b>noraplan<sup>®</sup> stone, Articles 0249 &amp; 2600</b> |
| 2. ASTM Specification: | Type I and Grade 1  |

	ASTM F1344 Standard Specification for Rubber Floor Tile	
3.	Limited Wear Warranty:	5 years
4.	Material:	nora <sup>®</sup> vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5.	Composition:	Homogeneous rubber compound with a non-directional scattered granulate design
6.	Color:	20 standard colors (Article 0249); 8 standard colors (Article 2600)
7.	Surface:	Slightly textured (Article 0249); smooth (Article 2600)
8.	Back of Tile:	Double-sanded smooth
9.	Material Size (ASTM F2055): ± 0.018 (± 0.45mm) is required	24.015 inches by 24.015 inches (610mm by 610mm)
10.	Squareness (ASTM F2055): ± 0.018 inches (± 0.45mm) is required	Meets requirements
11.	Thickness (ASTM F386): ± 0.005 inches (± 0.127mm) is required	0.08 inches (2mm)
12.	Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
13.	Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.97
14.	Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 196 (flaming) and 207 (non-flaming)
15.	CAN/ULC-S102.2:	Surface Burning, FSC1 of 125 and SD of 370
16.	Burn Resistance:	Resistant to cigarette and solder burns
17.	Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.90 (not recommended for ramps)
18.	Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
19.	VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
20.	Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
21.	Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 11, Δ Lw 8 dB (compare only Δ values)
22.	Sound Generation:	67.9 dBA, 69.9 dBC and 22 Sones, Independently tested
23.	Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
24.	Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
25.	Rolling Load Limit:	≤ 450 lbs. / sq. inch, with no forklift traffic
26.	Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss
27.	Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 913.1 lbs. per sq. inch
28.	Oil & Grease Resistance:	No
29.	Heat Resistance (ASTM F1514):	Easily achieved with all batches and regular maintenance

- Avg.  $\Delta E \leq 8.0$  is required
30. Light Resistance: Easily achieved with all batches and regular maintenance  
Avg.  $\Delta E \leq 8.0$  is required
31. Static Generation (AATCC 134): < 2000 Volts at 20% RH
32. Thermal Transmission (ASTM C518): R-value of 0.04
33. Cleaning: Cleaned and maintained effectively using water, nora<sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
34. Shine: Higher shine achieved by buffing without any artificial topical applied coatings.
35. Stain Removal: Samples of the product shall be provided for stain removal testing by the owner. Sample size shall be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples shall have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing shall consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period shall be no less than one week. Removal of chemicals shall be in accordance with manufacturers published cleaning and maintenance recommendations.
36. Substrate Preparation: Per ASTM F710 and the nora<sup>®</sup> Installation Guide

### 2.3 RESILIENT TILE FLOORING FOR COMMERCIAL TRAFFIC WITH PRE-APPLIED ADHESIVE

- A. Rubber Floor Tile (nora<sup>®</sup> nTx):
1. Product Name: **norament<sup>®</sup> arago nTx, Article 3122**
  2. ASTM Specification: Type IB and Grade 2  
ASTM F1344 Standard Specification for Rubber Floor Tile
  3. Limited Wear Warranty: 10 years  
Limited Bond Warranty: 10 years
  4. Material: nora<sup>®</sup> vulcanized rubber compound 926 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
  5. Composition: Homogeneous rubber compound with a random scattered design
  6. Color: 2 standard colors; additional colors available with minimum order
  7. Surface: Landscape
  8. Back of Tile: nora<sup>®</sup> nTx pre-applied adhesive
  9. Material Size (ASTM F2055): 39.53 inches by 19.76 inches (1004mm by 502mm)  
 $\pm 0.02$  inches ( $\pm 0.5$ mm) by  $\pm 0.018$  inch ( $\pm 0.45$ mm) is required

10. Squareness (ASTM F2055): ± 0.010 inches (± 0.254mm) is required	Meets requirements
11. Thickness (ASTM F386): + 0.015/-0.005 inches (+ 0.381/- 0.127mm) is required	0.14 inches (3.5mm)
12. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
13. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.98
14. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 369 (flaming) and 205 (non-flaming)
15. Burn Resistance:	Resistant to cigarette and solder burns
16. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.81, Neolite wet 0.87 (not recommended for ramps)
17. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
18. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
19. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20. Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 15, Δ Lw 10dB (compare only Δ values)
21. Hardness (ASTM D2240): ≥ 70 is required	Shore type "A", 82
22. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.004 inches with 800 lbs.
23. Rolling Load Limit:	≤ 850 lbs. / sq. inch; will withstand fork lift traffic
24. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss
25. Oil & Grease Resistance:	Yes
26. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
27. Static Generation (AATCC 134):	< 2000 Volts at 20% RH
28. Thermal Transmission (ASTM C518):	R-value of -0.90
29. Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
30. Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m <sup>2</sup> , pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in

accordance with manufacturers published cleaning and maintenance recommendations.

31. Substrate Preparation:

As per the nora<sup>®</sup> nTx Installation Guide

B. Rubber Floor Tile (nora<sup>®</sup> nTx):

- |   |   |
|---|---|
| 1. Product Name:  | <b>norament<sup>®</sup> grano nTx, Article 3111</b>   |
| 2. ASTM Specification:<br>ASTM F1344 Standard Specification for Rubber Floor Tile   | Type IB and Grade 2   |
| 3. Limited Wear Warranty:<br>Limited Bond Warranty:                                 | 10 years<br>10 years  |
| 4. Material:  | nora <sup>®</sup> vulcanized rubber compound 926 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous rubber compound with a random scattered design  |
| 6. Color:   | 6 standard colors; additional colors available with minimum order   |
| 7. Surface:   | Hammered  |
| 8. Back of Tile:  | nora <sup>®</sup> nTx pre-applied adhesive  |
| 9. Material Size (ASTM F2055):<br>± 0.02 inches (± 0.5mm) is required               | 39.53 inches by 39.53 inches (1004mm by 1004mm)   |
| 10. Squareness (ASTM F2055):<br>± 0.010 inches (± 0.254mm) is required              | Meets requirements  |
| 11. Thickness (ASTM F386):<br>+ 0.015/-0.005 inches (+ 0.381/- 0.127mm) is required | 0.14 inches (3.5mm)   |
| 12. Dimensional Stability (ASTM F2199):<br>≤ 0.15% in both directions is required   | Meets requirements  |
| 13. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required    | NBSIR 75 950, 0.97  |
| 14. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required                        | NBS, 346 (flaming) and 145 (non-flaming)  |
| 15. Burn Resistance:  | Resistant to cigarette and solder burns   |
| 16. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                              | Static coefficient of friction, Neolite dry 0.99, Neolite wet 0.95(not recommended for Ramps)   |
| 17. Bacteria Resistance (ASTM E2180/ASTM G21):                                      | Resistant to bacteria, fungi, and micro-organism activity   |
| 18. VOC's:  | This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant   |
| 19. Latex Allergies (ASTM D6499):   | Inhibition Elisa, results are below detection level   |
| 20. Sound Absorption (ASTM E2179/ISO 140):  | Δ IIC 11, Δ Lw 11 dB (compare only Δ values)  |
| 21. Sound Generation:   | 66.3 dBA, 68.5 dBC and 19.6 Sones, Independently tested   |
| 22. Hardness (ASTM D2240):<br>≥ 70 is required                                      | Shore type "A", 82  |
| 23. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required            | Residual compression of 0.005 inches with 800 lbs.  |

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|---|--|
| 24. Rolling Load Limit:   | ≤ 850 lbs. / sq. inch; will withstand fork lift traffic  |
| 25. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.002 oz. (0.05g) weight loss   |
| 26. Oil & Grease Resistance:  | Yes  |
| 27. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required          | Easily achieved with all batches and regular maintenance   |
| 28. Static Generation (AATCC 134):                                      | < 2000 Volts at 20% RH   |
| 29. Thermal Transmission (ASTM C518):                                   | R-value of -0.90   |
| 30. Cleaning:   | Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.  |
| 31. Shine:  | Higher shine achieved by buffing without any artificial topical applied coatings.  |
| 32. Stain Removal:  | Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m <sup>2</sup> , pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 33. Substrate Preparation:  | As per the nora <sup>®</sup> nTx Installation Guide  |

C. Rubber Floor Tile (nora<sup>®</sup> nTx):

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|---|---|
| 1. Product Name:  | <b>norament<sup>®</sup> satura nTx, Article 3111</b>  |
| 2. ASTM Specification:<br>ASTM F1344 Standard Specification for Rubber Floor Tile | Type IB and Grade 2   |
| 3. Limited Wear Warranty:<br>Limited Bond Warranty:                               | 10 years<br>10 years  |
| 4. Material:  | nora <sup>®</sup> vulcanized rubber compound 926 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous rubber compound with a random scattered design  |
| 6. Color:   | 2 standard colors; additional colors available with minimum order   |
| 7. Surface:   | Hammered  |
| 8. Back of Tile:  | nora <sup>®</sup> nTx pre-applied adhesive  |
| 9. Material Size (ASTM F2055):<br>± 0.02 inches (± 0.5mm) is required             | 39.53 inches by 39.53 inches (1004mm by 1004mm)   |

10. Squareness (ASTM F2055): ± 0.010 inches (± 0.254mm) is required	Meets requirements
11. Thickness (ASTM F386): + 0.015/-0.005 inches (+ 0.381/- 0.127mm) is required	0.14 inches (3.5mm)
12. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
13. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.97
14. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 346 (flaming) and 145 (non-flaming)
15. Burn Resistance:	Resistant to cigarette and solder burns
16. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.99, Neolite wet 0.95 (not recommended for ramps)
17. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
18. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
19. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20. Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 11, Δ Lw 11 dB (compare only Δ values)
21. Sound Generation:	66.3 dBA, 68.5 dBC and 19.6 Sones, Independently tested
22. Hardness (ASTM D2240): ≥ 70 is required	Shore type "A", 82
23. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.005 inches with 800 lbs.
24. Rolling Load Limit:	≤ 850 lbs. / sq. inch; will withstand fork lift traffic
25. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.002 oz. (0.05g) weight loss
26. Oil & Grease Resistance:	Yes
27. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
28. Static Generation (AATCC 134):	< 2000 Volts at 20% RH
29. Thermal Transmission (ASTM C518):	R-value of -0.90
30. Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
31. Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
32. Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m <sup>2</sup> , pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common



healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.

33. Substrate Preparation:

As per the nora<sup>®</sup> nTx Installation Guide

D. Rubber Floor Tile (nora<sup>®</sup> nTx):

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|---|--|
| 1. Product Name:  | <b>norament<sup>®</sup> xp nTx, Article 3111</b>   |
| 2. ASTM Specification:<br>ASTM F1344 Standard Specification for Rubber Floor Tile   | Type IB and Grade 1  |
| 3. Limited Wear Warranty:   | 10 years   |
| Limited Bond Warranty:  | 10 years   |
| 4. Material:  | nora <sup>®</sup> vulcanized rubber compound xp with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous  |
| 6. Color:   | 4 standard colors; additional colors available with minimum order  |
| 7. Surface:   | Hammered   |
| 8. Back of Tile:  | nora <sup>®</sup> nTx pre-applied adhesive   |
| 9. Material Size (ASTM F2055):<br>± 0.02 inches (± 0.5mm) is required               | 39.53 inches by 39.53 inches (1004mm by 1004mm)  |
| 10. Squareness (ASTM F2055):<br>± 0.010 inches (± 0.254mm) is required              | Meets requirements   |
| 11. Thickness (ASTM F386):<br>+ 0.015/-0.005 inches (+ 0.381/- 0.127mm) is required | 0.14 inches (3.5mm)  |
| 12. Dimensional Stability (ASTM F2199):<br>≤ 0.15% in both directions is required   | Meets requirements   |
| 13. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required    | NBSIR 75 950, 0.54   |
| 14. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required                        | NBS, 422 (flaming) and 201 (non-flaming)   |
| 15. CAN/ULC-S102.2:   | Surface Burning, FSC1 of 55 and SD of 450  |
| 16. Burn Resistance:  | Resistant to cigarette and solder burns  |
| 17. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                              | Static coefficient of friction, Neolite dry 0.90, Neolite wet 1.0  |
| 18. Bacteria Resistance (ASTM E2180/ASTM G21):                                      | Resistant to bacteria, fungi, and micro-organism activity  |
| 19. VOC's:  | This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant  |
| 20. Latex Allergies (ASTM D6499):   | Inhibition Elisa, results are below detection level  |
| 21. Sound Absorption (ASTM E2179):  | Δ IIC 15 (compare only Δ values)   |
| 22. Hardness (ASTM D2240):<br>≥ 70 is required                                      | Shore type "A", 89   |

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|--|--|
| 23. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.002 inches with 800 lbs.   |
| 24. Rolling Load Limit:  | ≤ 850 lbs. / sq. inch; will withstand fork lift traffic  |
| 25. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.005 oz. (0.13g) weight loss   |
| 26. Oil & Grease Resistance:   | No   |
| 27. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance   |
| 28. Static Generation (AATCC 134):                                       | < 2000 Volts at 20% RH   |
| 29. Cleaning:  | Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.  |
| 30. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.  |
| 31. Stain Removal:   | Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m <sup>2</sup> , pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 32. Substrate Preparation:   | As per the nora® nTx Installation Guide  |

E. Rubber Floor Tile (nora® nTx):

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|---|--|
| 1. Product Name:  | <b>norament® xp trac nTx, Article 3134</b>   |
| 2. ASTM Specification:<br>ASTM F1344 Standard Specification for Rubber Floor Tile | Type IB and Grade 1  |
| 3. Limited Wear Warranty:<br>Limited Bond Warranty;                               | 10 years<br>10 years   |
| 4. Material:  | nora® vulcanized rubber compound xp with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous  |
| 6. Color:   | 4 standard colors; additional colors available with minimum order  |
| 7. Surface:   | A granular design with an enhanced surface profile   |
| 8. Back of Tile:  | nora® nTx pre-applied adhesive   |
| 9. Material Size (ASTM F2055):<br>± 0.02 inches (± 0.5mm) is required             | 39.53 inches by 39.53 inches (1004mm by 1004mm)  |

10. Squareness (ASTM F2055): ± 0.010 inches (± 0.254mm) is required	Meets requirements
11. Thickness (ASTM F386): + 0.015/-0.005 inches (+ 0.381/- 0.127mm) is required	0.14 inches (3.5mm)
12. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
13. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.68
14. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 372 (flaming) and 284 (non-flaming)
15. CAN/ULC-S102.2:	Surface Burning, FSC1 of 55 and SD of 545
16. Burn Resistance:	Resistant to cigarette and solder burns
17. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.99, Neolite wet 0.98
18. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
19. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant
20. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
21. Sound Absorption (ASTM E2179):	Δ IIC 15 (compare only Δ values)
22. Hardness (ASTM D2240): ≥ 70 is required	Shore type "A", 89 achieved
23. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.005 inches with 800 lbs.
24. Rolling Load Limit:	≤ 850 lbs. / sq. inch; will withstand fork lift traffic
25. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.005 oz. (0.13g) weight loss
26. Oil & Grease Resistance:	No
27. Heat Resistance: Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
28. Static Generation (AATCC 134):	< 2000 Volts at 20% RH
29. Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
30. Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m <sup>2</sup> , pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in

accordance with manufacturers published cleaning and maintenance recommendations.

31. Substrate Preparation:

As per the nora<sup>®</sup> nTx Installation Guide

## 2.4 RESILIENT Plank FLOORING FOR COMMERCIAL TRAFFIC

### A. Rubber Floor Plank:

- |   |   |
|---|---|
| 1. Product Name:  | <b>noraplan<sup>®</sup> valua 2.0 mm, Articles 272A, 273A &amp; 274A</b>  |
| 2. ASTM Specification:<br>ASTM F1344 Standard Specification for Rubber Floor Tile   | Type I and Grade 1  |
| 3. Limited Wear Warranty:   | 5 years   |
| 4. Material:  | nora <sup>®</sup> vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous rubber compound with a marbled design   |
| 6. Color:   | 6 standard colors; additional colors available upon request   |
| 7. Surface:   | Linear structured   |
| 8. Back of Tile:  | Double-sanded smooth  |
| 9. Material Size (ASTM F2055):<br>Up to and including 12 inches = ± 0.016 (± 0.4mm); larger than 12 inches up to and including 24 inches = ± 0.018 (± 0.45mm); larger than 24 inches = ± 0.02 (± 0.5mm) is required | 272A: 24.015 inches by 8.07 inches (610mm by 205mm)<br>273A: 24.015 inches by 12 inches (610mm by 305mm)<br>274A: 48.03 inches by 15.94 inches (1220mm by 405mm)  |
| 10. Squareness (ASTM F2055):<br>± 0.018 inches (± 0.45mm) is required   | Meets requirements  |
| 11. Thickness (ASTM F386):<br>± 0.015/-0.005 inches (± 0.381/-0.127 mm) is required   | 0.08 inches (2mm)   |
| 12. Dimensional Stability (ASTM F2199):<br>≤ 0.15% in both directions is required   | Meets requirements  |
| 13. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required  | NBSIR 75 950, 0.98  |
| 14. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required  | NBS, 134 (flaming) and 109 (non-flaming)  |
| 15. Burn Resistance:  | Resistant to cigarette and solder burns   |
| 16. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required  | Static coefficient of friction, rubber dry 0.97, rubber wet 0.85 (not recommended for ramps)  |
| 17. Bacteria Resistance (ASTM E2180/ASTM G21):  | Resistant to bacteria, fungi, and micro-organism activity   |
| 18. VOC's:  | This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant   |
| 19. Latex Allergies (ASTM D6499):   | Inhibition Elisa, results are below detection level   |
| 20. Sound Absorption (ISO 140):   | Δ Lw 8 dB (compare only Δ values)   |
| 21. Hardness (ASTM D2240):<br>≥ 85 is required  | Shore type "A", 92  |

- |  |   |
|--|---|
| 22. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.002 inches with 800 lbs.  |
| 23. Rolling Load Limit:  | ≤ 450 lbs. / sq. inch, with no forklift traffic   |
| 24. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.006 oz. (0.17g) weight loss  |
| 25. Elongation (ASTM D412):<br>≥ 300 lbs. per sq. inch is required       | Modulus @ 10% is 913.1 lbs. per sq. inch  |
| 26. Oil & Grease Resistance:   | No  |
| 27. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance  |
| 28. Light Resistance:<br>Avg. ΔE ≤ 8.0 is required                       | Easily achieved with all batches and regular maintenance  |
| 29. Static Generation (AATCC 134):                                       | < 2000 Volts at 20% RH  |
| 30. Thermal Transmission (ASTM C518):                                    | R-value of 0.04   |
| 31. Cleaning:  | Cleaned and maintained effectively without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic Refer to nora maintenance guides for product specific details.  |
| 32. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.   |
| 33. Stain Removal:   | Samples of the product shall be provided for stain removal testing by the owner. Sample size shall be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples shall have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing shall consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period shall be no less than one week. Removal of chemicals shall be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 34. Substrate Preparation:   | Per ASTM F710 and the nora® Installation Guide  |

**B. Rubber Floor Plank:**

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|---|---|
| 1. Product Name:  | <b>noraplan® valua 3.0 mm, Articles 275A, 276A &amp; 277A</b>   |
| 2. ASTM Specification:<br>ASTM F1344 Standard Specification for Rubber Floor Tile | Type I and Grade 1  |
| 3. Limited Wear Warranty:   | 5 years   |
| 4. Material:  | nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous rubber compound with a marbleized design  |
| 6. Color:   | 6 standard colors; additional colors available upon request   |
| 7. Surface:   | Linear structure  |

8.	Back of Tile:	Double-sanded smooth
9.	Material Size (ASTM F2055): Up to and including 12 inches = $\pm 0.016$ ( $\pm 0.4\text{mm}$ ); larger than 12 inches up to and including 24 inches = $\pm 0.018$ ( $\pm 0.45\text{mm}$ ); larger than 24 inches = $\pm 0.02$ ( $\pm 0.5\text{mm}$ ) is required	275A: 24.015 inches by 8.07 inches (610mm by 205mm) 276A: 24.015 inches by 12 inches (610mm by 305mm) 277A: 48.03 inches by 15.94 inches (1220mm by 405mm)
10.	Squareness (ASTM F2055): $\pm 0.018$ inches ( $\pm 0.45\text{mm}$ ) is required	Meets requirements
11.	Thickness (ASTM F386): $\pm 0.015/-0.005$ inches ( $\pm 0.381/-0.127$ mm) is required	0.12 inches (3mm)
12.	Dimensional Stability (ASTM F2199): $\leq 0.15\%$ in both directions is required	Meets requirements
13.	Flammability (E648/NFPA 253): $\geq 0.45$ watts/sq. cm for Class 1 is required	NBSIR 75 950, 1.08
14.	Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 360 (flaming) and 203 (non-flaming)
15.	Burn Resistance:	Resistant to cigarette and solder burns
16.	Slip Resistance (ASTM D2047): $\geq 0.5$ is required	Static coefficient of friction, rubber dry 0.97, rubber wet 0.85 (not recommended for ramps)
17.	Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
18.	VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
19.	Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20.	Sound Absorption (ISO 140):	$\Delta L_w$ 10 dB (compare only $\Delta$ values)
21.	Hardness (ASTM D2240): $\geq 85$ is required	Shore type "A", 92
22.	Static Load (ASTM F970): $\leq 0.005$ inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
23.	Rolling Load Limit:	$\leq 550$ lbs. / sq. inch, with no forklift traffic
24.	Abrasion Resistance (ASTM D3389): $\leq 0.035$ oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.006 oz. (0.18g) weight loss
25.	Elongation (ASTM D412): $\geq 300$ lbs. per sq. inch is required	Modulus @ 10% is 1299 lbs. per sq. inch
26.	Oil & Grease Resistance:	No
27.	Heat Resistance (ASTM F1514): Avg. $\Delta E \leq 8.0$ is required	Easily achieved with all batches and regular maintenance
28.	Light Resistance: Avg. $\Delta E \leq 8.0$ is required	Easily achieved with all batches and regular maintenance
29.	Static Generation (AATCC 134):	< 2000 Volts at 20% RH
30.	Thermal Transmission (ASTM C518):	R-value of 0.04
31.	Cleaning:	Cleaned and maintained effectively without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.

- 32. Shine: Higher shine achieved by buffing without any artificial topical applied coatings.
- 33. Stain Removal: Samples of the product shall be provided for stain removal testing by the owner. Sample size shall be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples shall have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing shall consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period shall be no less than one week. Removal of chemicals shall be in accordance with manufacturers published cleaning and maintenance recommendations.
- 34. Substrate Preparation: Per ASTM F710 and the nora® Installation Guide

2.5 RESILIENT PLANK FLOORING FOR COMMERCIAL TRAFFIC WITH PRE-APPLIED ADHESIVE

A. Rubber Floor Plank (nora® nTx):

- 1. Product Name: **noraplan® valua nTx 2.0 mm, Articles 211B, 212B & 213B**
- 2. ASTM Specification: **Type I and Grade 1**  
ASTM F1344 Standard Specification for Rubber Floor Tile
- 3. Limited Wear Warranty: **5 years**
- Limited Bond Warranty: **10 years**
- 4. Material: **nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury**
- 5. Composition: **Homogeneous rubber compound with marbled design**
- 6. Color: **6 standard colors; additional colors available upon request**
- 7. Surface: **Linear structured**
- 8. Back of Tile: **nora® nTx pre-applied adhesive**
- 9. Material Size (ASTM F2055): **211B: 24.015 inches by 8.07 inches (610mm by 205mm)**  
Up to and including 12 inches = ± 0.016 (± 0.4mm); larger than 12 inches up to and including 24 inches = ± 0.018 (± 0.45mm); larger than 24 inches = ± 0.02 (± 0.5mm) is required  
**212B: 24.015 inches by 12 inches (610mm by 305mm)**  
**213B: 48.03 inches by 15.94 inches (1220mm by 405mm)**
- 10. Squareness (ASTM F2055): **Meets requirements**  
± 0.018 inches (± 0.45mm) is required
- 11. Thickness (ASTM F386): **0.08 inches (2.0 mm)**  
± 0.005 inches (± 0.127mm) is required
- 12. Dimensional Stability (ASTM F2199): **Meets requirements**  
≤ 0.15% in both directions is required
- 13. Flammability (E648/NFPA 253): **NBSIR 75 950, 0.98**  
≥ 0.45 watts/sq. cm for Class 1 is required
- 14. Smoke Density (ASTM E662/NFPA 258): **NBS, 134 (flaming) and 109 (non-flaming)**  
< 450 is required
- 15. Burn Resistance: **Resistant to cigarette and solder burns**

- |  |   |
|--|---|
| 16. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                   | Static coefficient of friction, Rubber dry 0.97, Rubber wet 0.85<br>(not recommended for ramps)   |
| 17. Bacteria Resistance (ASTM E2180/ASTM G21):                           | Resistant to bacteria, fungi, and micro-organism activity   |
| 18. VOC's:   | This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant   |
| 19. Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level   |
| 20. Sound Absorption (ISO 140):  | Δ Lw 8 dB (compare only Δ values)   |
| 21. Hardness (ASTM D2240):<br>≥ 85 is required                           | Shore type "A", 92  |
| 22. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.002 inches with 800 lbs.  |
| 23. Rolling Load Limit:  | ≤ 450 lbs. / sq. inch, with no forklift traffic   |
| 24. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.006 oz. (0.17g) weight loss  |
| 25. Elongation (ASTM D412):<br>≥ 300 lbs. per sq. inch is required       | Modulus @ 10% is 913.1 lbs. per sq. inch  |
| 26. Oil & Grease Resistance:   | No  |
| 27. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance  |
| 28. Light Resistance:<br>Avg. ΔE ≤ 8.0 is required                       | Easily achieved with all batches and regular maintenance  |
| 29. Static Generation (AATCC 134):                                       | < 2000 Volts at 20% RH  |
| 30. Thermal Transmission (ASTM C518):                                    | R-value of 0.04   |
| 31. Cleaning:  | Cleaned and maintained effectively without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 32. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.   |
| 33. Stain Removal:   | Samples of the product shall be provided for stain removal testing by the owner. Sample size shall be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples shall have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing shall consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period shall be no less than one week. Removal of chemicals shall be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 34. Substrate Preparation:   | As per the nora® nTx Installation Guide   |
| B. Rubber Floor Plank (nora® nTx):                                       |   |
| 1. Product Name:   | <b>noraplan® valua nTx 3.0 mm, Articles 214B, 215B &amp; 216B</b>   |
| 2. ASTM Specification:   | Type I and Grade 1  |



	ASTM F1344 Standard Specification for Rubber Floor Tile	
3.	Limited Wear Warranty:	5 years
	Limited Bond Warranty:	10 years
4.	Material:	nora <sup>®</sup> vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5.	Composition:	Homogeneous rubber compound with marbled design
6.	Color:	6 standard colors; additional colors available upon request
7.	Surface:	Linear structured
8.	Back of Tile:	nora <sup>®</sup> nTx pre-applied adhesive
9.	Material Size (ASTM F2055): Up to and including 12 inches = ± 0.016 (± 0.4mm); larger than 12 inches up to and including 24 inches = ± 0.018 (± 0.45mm); larger than 24 inches = ± 0.02 (± 0.5mm) is required	214B: 24.015 inches by 8.07 inches (610mm by 205mm) 215B: 24.015 inches by 12 inches (610mm by 305mm) 216B: 48.03 inches by 15.94 inches (1220mm by 405mm)
10.	Squareness (ASTM F2055): ± 0.018 inches (± 0.45mm) is required	Meets requirements
11.	Thickness (ASTM F386): ± 0.005 inches (± 0.127mm) is required	0.12 inches (3.0 mm)
12.	Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
13.	Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 1.08
14.	Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 360 (flaming) and 203 (non-flaming)
15.	Burn Resistance:	Resistant to cigarette and solder burns
16.	Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Rubber dry 0.97, Rubber wet 0.85 (not recommended for ramps)
17.	Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
18.	VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, GREENGUARD Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
19.	Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20.	Sound Absorption (ISO 140):	Δ Lw 10 dB (compare only Δ values)
21.	Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
22.	Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
23.	Rolling Load Limit:	≤ 550 lbs. / sq. inch, with no forklift traffic
24.	Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.006 oz. (0.17g) weight loss
25.	Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 1,299.0 lbs. per sq. inch
26.	Oil & Grease Resistance:	No

27. Heat Resistance (ASTM F1514): Avg. $\Delta E \leq 8.0$ is required	Easily achieved with all batches and regular maintenance
28. Light Resistance: Avg. $\Delta E \leq 8.0$ is required	Easily achieved with all batches and regular maintenance
29. Static Generation (AATCC 134):	< 2000 Volts at 20% RH
30. Thermal Transmission (ASTM C518):	R-value of 0.04
31. Cleaning:	Cleaned and maintained effectively without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
32. Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
33. Stain Removal:	Samples of the product shall be provided for stain removal testing by the owner. Sample size shall be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples shall have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing shall consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period shall be no less than one week. Removal of chemicals shall be in accordance with manufacturers published cleaning and maintenance recommendations.
34. Substrate Preparation:	As per the nora <sup>®</sup> nTx Installation Guide

## 2.6 RESILIENT SHEET FLOORING FOR COMMERCIAL TRAFFIC

### A. Rubber Sheet Floor Covering:

1. Product Name:	<b>noraplan<sup>®</sup> eco, Article 1490</b>
2. ASTM Specification: ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing	Type I
3. Limited Wear Warranty:	5 years
4. Material:	nora <sup>®</sup> vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5. Composition:	Homogeneous rubber compound with a random scattered design
6. Color:	16 standard colors
7. Surface:	Smooth
8. Back of Sheet:	Double-sanded smooth
9. Material Dimensions (ASTM F1859):	49.21 feet by 48 inches (15m by 1.22m), $\geq$ amount specified
10. Thickness (ASTM F386): $\pm 0.006$ inches ( $\pm 0.15$ mm) is required	0.08 inches (2mm)
11. Dimensional Stability (ASTM F2199): $\leq 0.15\%$ in both directions is required	Meets requirements

- |  |   |
|--|---|
| 12. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required | NBSIR 75 950, 0.97  |
| 13. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required                     | NBS, 196 (flaming) and 207 (non-flaming)  |
| 14. CAN/ULC-S102.2:  | Surface Burning, FSC1 of 125 and SD of 370  |
| 15. Burn Resistance:   | Resistant to cigarette and solder burns   |
| 16. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                           | Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.90<br>(not recommended for ramps)   |
| 17. Bacteria Resistance (ASTM E2180/ASTM G21):                                   | Resistant to bacteria, fungi, and micro-organism activity   |
| 18. VOC's:   | This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant   |
| 19. Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level   |
| 20. Sound Absorption (ASTM E2179/ISO 140):                                       | Δ IIC 11, Δ Lw 8 dB (compare only Δ values)   |
| 21. Sound Generation:  | 67.9 dBA, 69.9 dBC and 22 Sones, Independently tested   |
| 22. Hardness (ASTM D2240):<br>≥ 85 is required                                   | Shore type "A", 92 achieved   |
| 23. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required         | Residual compression of 0.003 inches with 800 lbs.  |
| 24. Rolling Load Limit:  | ≤ 450 lbs. / sq. inch, with no forklift traffic   |
| 25. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required          | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss  |
| 26. Elongation (ASTM D412):<br>≥ 300 lbs. per sq. inch is required               | Modulus @ 10% is 913.1 lbs. per sq. inch  |
| 27. Oil & Grease Resistance:   | No  |
| 28. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required                   | Easily achieved with all batches and regular maintenance  |
| 29. Light Resistance:<br>Avg. ΔE ≤ 8.0 is required                               | Easily achieved with all batches and regular maintenance  |
| 30. Static Generation (AATCC 134):   | < 2000 Volts at 20% RH  |
| 31. Thermal Transmission (ASTM C518):  | R-value of 0.04   |
| 32. Cleaning:  | Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 33. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.   |
| 34. Stain Removal:   | Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene |

Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.

35. Substrate Preparation:

Per ASTM F710 and the nora® Installation Guide

B. Rubber Sheet Floor Covering (acoustic):

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|--|---|
| 1. Product Name:   | <b>noraplan environcare™ acoustic, Article 1420</b>   |
| 2. ASTM Specification:<br>ASTM F1860 Standard Specification for Rubber Sheet Floor Covering With Backing | Type I and Grade 2  |
| 3. Limited Wear Warranty:  | 5 years   |
| 4. Material:   | nora® vulcanized rubber compound 915 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:  | Homogeneous rubber compound with a random scattered design  |
| 6. Color:  | 8 standard colors   |
| 7. Surface:  | Smooth  |
| 8. Back of Sheet:  | Double-sanded smooth  |
| 9. Material Dimensions (ASTM F1860):   | 39.37 feet by 48 inches (12m by 1.22m), ≥ amount specified  |
| 10. Thickness (ASTM F387):<br>± 0.008 inches (± 0.2mm) is required                                       | 0.16 inches (4mm) total thickness   |
| 11. Dimensional Stability (ASTM F2199):<br>≤ 0.15% in both directions is required                        | Meets requirements  |
| 12. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required                         | NBSIR 75 950, 1.0   |
| 13. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required   | NBS, 299 (flaming) and 153 (non-flaming)  |
| 14. CAN/ULC-S102.2:  | Surface Burning, FSC1 of 130 and SD of 525  |
| 15. Burn Resistance:   | Resistant to cigarette and solder burns   |
| 16. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required   | Static coefficient of friction, Neolite dry 1.0, Neolite wet 0.90 (not recommended for ramps)   |
| 17. Bacteria Resistance (ASTM E2180/ASTM G21):   | Resistant to bacteria, fungi, and micro-organism activity   |
| 18. VOC's:   | This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant   |
| 19. Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level   |
| 20. Sound Absorption (ASTM E2179/ISO 140):   | Δ IIC 21, Δ Lw 18dB (compare only Δ values)   |
| 21. Sound Generation:  | 61.7 dBA, 66.5 dBC and 14.8 Sones, Independently tested   |
| 22. Hardness (ASTM D2240):<br>≥ 85 is required   | Shore type "A", 92  |
| 23. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required                                 | Residual compression of 0.003 inches with 800 lbs.  |
| 24. Rolling Load Limit:  | ≤ 450 lbs. / sq. inch, with no forklift traffic   |
| 25. Abrasion Resistance (ASTM D3389):  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.007  |

- |                                       |                                     |   |
|---------------------------------------|-------------------------------------|---|
|                                       | ≤ 0.035 oz. (1.0g) is required      | oz. (0.19g) weight loss   |
| 26. Elongation (ASTM D412):           | ≥ 300 lbs. per sq. inch is required | Modulus @ 10% is 413.8 lbs. per sq. inch  |
| 27. Oil & Grease Resistance:          |                                     | No  |
| 28. Heat Resistance (ASTM F1514):     | Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance  |
| 29. Light Resistance:                 | Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance  |
| 30. Static Generation (AATCC 134):    |                                     | < 2000 Volts at 20% RH  |
| 31. Thermal Transmission (ASTM C518): |                                     | R-value of 0.20   |
| 32. Cleaning:                         |                                     | Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 33. Shine:                            |                                     | Higher shine achieved by buffing without any artificial topical applied coatings.   |
| 34. Stain Removal:                    |                                     | Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 35. Substrate Preparation:            |                                     | Per ASTM F710 and the nora® Installation Guide  |

C. Rubber Sheet Floor Covering:

- |   |   |
|---|---|
| 1. Product Name:  | <b>noraplan environcare™ 2.0 mm, Article 1462</b>   |
| 2. ASTM Specification:  | Type I  |
| ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing |   |
| 3. Limited Wear Warranty:   | 5 years   |
| 4. Material:  | nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous rubber compound with a random scattered design  |
| 6. Color:   | 48 standard colors  |
| 7. Surface:   | Smooth  |
| 8. Back of Sheet:   | Double-sanded smooth  |

9. Material Dimensions (ASTM F1859):	49.21 feet by 48 inches (15m by 1.22m), ≥ amount specified
10. Thickness (ASTM F386): ± 0.006 inches (± 0.15mm) is required	0.08 inches (2mm)
11. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
12. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.97
13. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 196 (flaming) and 207 (non-flaming)
14. CAN/ULC-S102.2:	Surface Burning, FSC1 of 125 and SD of 370
15. Burn Resistance:	Resistant to cigarette and solder burns
16. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.90 (not recommended for ramps)
17. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
18. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
19. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20. Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 11, Δ Lw 8dB (compare only Δ values)
21. Sound Generation:	67.9 dBA, 69.9 dBC and 22 Sones, Independently tested
22. Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
23. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
24. Rolling Load Limit:	≤ 450 lbs. / sq. inch, with no forklift traffic
25. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss
26. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 913.1 lbs. per sq. inch
27. Oil & Grease Resistance:	No
28. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
29. Light Resistance: Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
30. Static Generation (AATCC 134):	< 2000 Volts at 20% RH
31. Thermal Transmission (ASTM C518):	R-value of 0.04
32. Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
33. Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
34. Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24

inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.

35. Substrate Preparation:

Per ASTM F710 and the nora® Installation Guide

D. Rubber Sheet Floor Covering:

1. Product Name:
2. ASTM Specification:  
ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing
3. Limited Wear Warranty:
4. Material:
5. Composition:
6. Color:
7. Surface:
8. Back of Sheet:
9. Material Dimensions (ASTM F1859):
10. Thickness (ASTM F386):  
± 0.006 inches (± 0.15mm) is required
11. Dimensional Stability (ASTM F2199):  
≤ 0.15% in both directions is required
12. Flammability (E648/NFPA 253):  
≥ 0.45 watts/sq. cm for Class 1 is required
13. Smoke Density (ASTM E662/NFPA 258):  
< 450 is required
14. CAN/ULC-S102.2:
15. Burn Resistance:
16. Slip Resistance (ASTM D2047):  
≥ 0.5 is required
17. Bacteria Resistance (ASTM E2180/ASTM G21):
18. VOC's:
19. Latex Allergies (ASTM D6499):
20. Sound Absorption (ASTM E2179/ISO 140):
21. Sound Generation:

**noraplan environcare™ 3.0 mm, Article 1463**

Type I

5 years

nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury

Homogeneous rubber compound with a random scattered design

48 standard colors

Smooth

Double-sanded smooth

39.37 feet by 48 inches (12m by 1.22m), ≥ amount specified

0.12 inches (3mm)

Meets requirements

NBSIR 75 950, 1.03

NBS, 376 (flaming) and 256 (non-flaming)

Surface Burning, FSC1 of 125 and SD of 370

Resistant to cigarette and solder burns

Static coefficient of friction, Neolite dry 0.92 Neolite wet 0.91 (not recommended for ramps)

Resistant to bacteria, fungi, and micro-organism activity

This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant.

Inhibition Elisa, results are below detection level

Δ IIC 14, Δ Lw 10dB (compare only Δ values)

67.2 dBA, 68.9 dBC and 20.9 Sones, Independently tested

- |  |   |
|--|---|
| 22. Hardness (ASTM D2240):<br>≥ 85 is required                           | Shore type "A", 92 achieved   |
| 23. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.003 inches with 800 lbs.  |
| 24. Rolling Load Limit:  | ≤ 550 lbs. / sq. inch, with no forklift traffic   |
| 25. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.003 oz. (0.09g) weight loss  |
| 26. Elongation (ASTM D412):<br>≥ 300 lbs. per sq. inch is required       | Modulus @ 10% is 1,299.0 lbs. per sq. inch  |
| 27. Oil & Grease Resistance:   | No  |
| 28. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance  |
| 29. Light Resistance:<br>Avg. ΔE ≤ 8.0 is required                       | Easily achieved with all batches and regular maintenance  |
| 30. Static Generation (AATCC 134):                                       | < 2000 Volts at 20% RH  |
| 31. Thermal Transmission (ASTM C518):                                    | R-value of 0.04   |
| 32. Cleaning:  | Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 33. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.   |
| 34. Stain Removal:   | Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 35. Substrate Preparation:   | Per ASTM F710 and the nora® Installation Guide  |

E. Rubber Sheet Floor Covering:

- |   |   |
|---|---|
| 1. Product Name:  | <b>noraplan® Iona 2.0 mm, Article 166B</b>  |
| 2. ASTM Specification:<br>ASTM F1859 Standard Specification for<br>Rubber Sheet Floor Covering Without<br>Backing | Type I  |
| 3. Limited Wear Warranty:   | 5 years   |
| 4. Material:  | nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |



5. Composition:	Heterogeneous rubber compound
6. Color:	24 standard colors
7. Surface:	Textured
8. Back of Sheet:	Double-sanded smooth
9. Material Dimensions (ASTM F1859):	49.21 feet by 48 inches (15m by 1.22m), ≥ amount specified
10. Thickness (ASTM F386): ± 0.006 inches (± 0.15mm) is required	0.08 inches (2mm)
11. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
12. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.93
13. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 152 (flaming) and 186 (non-flaming)
14. CAN/ULC-S102.2:	Surface Burning, FSC1 of 125 and SD of 370
15. Burn Resistance:	Resistant to cigarette and solder burns
16. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.92 Neolite wet 0.91 (not recommended for ramps)
17. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi and micro-organism activity
18. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
19. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20. Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 11, Δ Lw 8dB (compare only Δ values)
21. Sound Generation:	67.9 dBA, 69.9 dBC and 22 Sones, Independently tested
22. Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
23. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
24. Rolling Load Limit:	≤ 450 lbs. / sq. inch, with no forklift traffic
25. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss
26. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 913.1 lbs. per sq. inch
27. Oil & Grease Resistance:	No
28. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
29. Light Resistance (ASTM F1515): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
30. Static Generation (AATCC 134/ANSI ESD S97.2):	< 2000 Volts at 20% RH
31. Thermal Transmission (ASTM C518):	R-value of 0.04
32. Cleaning:	Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any

teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.

33. Shine:

34. Stain Removal:

Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.

35. Substrate Preparation:

Per ASTM F710 and the nora® Installation Guide

F. Rubber Sheet Floor Covering:

1. Product Name:

**noraplan® Iona 3.0 mm, Article 167B**

2. ASTM Specification:

Type I

ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing

3. Limited Wear Warranty:

5 years

4. Material:

nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury

5. Composition:

Heterogeneous rubber compound

6. Color:

24 standard colors

7. Surface:

Textured

8. Back of Sheet:

Double-sanded smooth

9. Material Dimensions (ASTM F1859):

39.37 feet by 48 inches (12m by 1.22m), ≥ amount specified

10. Thickness (ASTM F386):

0.12 inches (3mm)

± 0.006 inches (± 0.15mm) is required

11. Dimensional Stability (ASTM F2199):

Meets requirements

≤ 0.15% in both directions is required

12. Flammability (E648/NFPA 253):

NBSIR 75 950, 1.09

≥ 0.45 watts/sq. cm for Class 1 is required

13. Smoke Density (ASTM E662/NFPA 258):

NBS, 150 (flaming) and 246 (non-flaming)

< 450 is required

14. CAN/ULC-S102.2:

Surface Burning, FSC1 of 125 and SD of 370

15. Burn Resistance:

Resistant to cigarette and solder burns

16. Slip Resistance (ASTM D2047):

Static coefficient of friction, Neolite dry 0.97, Neolite wet 0.94 (not recommended for ramps)

≥ 0.5 is required

17. Bacteria Resistance (ASTM E2180/ASTM G21):

Resistant to bacteria, fungi and micro-organism activity

18. VOC's:

This flooring is GREENGUARD Gold Certified for Low VOC

19. Latex Allergies (ASTM D6499):	Emissions, Blue Angel Certified and CA 01350 compliant Inhibition Elisa, results are below detection level
20. Sound Absorption (ASTM E2179/ISO 140):	$\Delta$ IIC 14, $\Delta$ Lw 10dB (compare only $\Delta$ values)
21. Sound Generation:	67.2 dBA, 68.9 dBC and 20.9 Sones, Independently tested
22. Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
23. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
24. Rolling Load Limit:	≤ 550 lbs. / sq. inch, with no forklift traffic
25. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.003 oz. (0.09g) weight loss
26. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 1,299.0 lbs. per sq. inch
27. Oil & Grease Resistance:	No
28. Heat Resistance (ASTM F1514): Avg. $\Delta$ E ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
29. Light Resistance (ASTM F1515): Avg. $\Delta$ E ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
30. Static Generation (AATCC 134/ANSI ESD S97.2):	< 2000 Volts at 20% RH
31. Thermal Transmission (ASTM C518):	R-value of 0.04
32. Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
33. Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.
34. Substrate Preparation:	Per ASTM F710 and the nora <sup>®</sup> Installation Guide
<b>G. Rubber Sheet Floor Covering (acoustic):</b>	
1. Product Name:	<b>noraplan<sup>®</sup> sentica acoustic, Article 1705</b>
2. ASTM Specification: ASTM F1860 Standard Specification for Rubber Sheet Floor Covering With Backing	Type I and Grade 2
3. Limited Wear Warranty:	5 years

4. Material:	nora <sup>®</sup> vulcanized rubber compound 915 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5. Composition:	Homogeneous rubber compound with a random scattered design
6. Color:	12 standard colors
7. Surface:	Smooth
8. Back of Sheet:	Double-sanded smooth
9. Material Dimensions (ASTM F1860):	39.37 feet by 48 inches (12m by 1.22m), ≥ amount specified
10. Thickness (ASTM F387): ± 0.008 inches (± 0.2mm) is required	0.16 inches (4mm) total thickness
11. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
12. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 1.0
13. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 299 (flaming) and 153 (non-flaming)
14. CAN/ULC-S102.2:	Surface Burning, FSC1 of 130 and SD of 525
15. Burn Resistance:	Resistant to cigarette and solder burns
16. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 1.0, Neolite wet 0.90 (not recommended for ramps)
17. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
18. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant.
19. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20. Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 21, Δ Lw 18dB (compare only Δ values)
21. Sound Generation:	61.7 dBA, 66.5 dBC and 14.8 Sones, Independently tested
22. Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
23. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
24. Rolling Load Limit:	≤ 450 lbs. / sq. inch, with no forklift traffic
25. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.007 oz. (0.19g) weight loss
26. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 413.8 lbs. per sq. inch
27. Oil & Grease Resistance:	No
28. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
29. Light Resistance: Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
30. Static Generation (AATCC 134):	< 2000 Volts at 20% RH
31. Thermal Transmission (ASTM C518):	R-value of 0.20
32. Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any

factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.

33. Shine: Higher shine achieved by buffing without any artificial topical applied coatings.
34. Stain Removal: Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.
35. Substrate Preparation: Per ASTM F710 and the nora® Installation Guide

H. Rubber Sheet Floor Covering:

1. Product Name: **noraplan® sentica 2.0 mm, Article 1700**
2. ASTM Specification: **Type I**  
ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing
3. Limited Wear Warranty: **5 years**
4. Material: **nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury**
5. Composition: **Homogeneous rubber compound with a random scattered design**
6. Color: **38 standard colors**
7. Surface: **Smooth**
8. Back of Sheet: **Double-sanded smooth**
9. Material Dimensions (ASTM F1859): **49.21 feet by 48 inches (15m by 1.22m), ≥ amount specified**
10. Thickness (ASTM F386): **0.08 inches (2mm)**  
± 0.006 inches (± 0.15mm) is required
11. Dimensional Stability (ASTM F2199): **Meets requirements**  
≤ 0.15% in both directions is required
12. Flammability (E648/NFPA 253): **NBSIR 75 950, 0.97**  
≥ 0.45 watts/sq. cm for Class 1 is required
13. Smoke Density (ASTM E662/NFPA 258): **NBS, 196 (flaming) and 207 (non-flaming)**  
< 450 is required
14. CAN/ULC-S102.2: **Surface Burning, FSC1 of 125 and SD of 370**
15. Burn Resistance: **Resistant to cigarette and solder burns**

16. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.90 (not recommended for ramps)
17. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
18. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
19. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20. Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 11, Δ Lw 8 dB (compare only Δ values)
21. Sound Generation:	67.9 dBA, 69.9 dBC and 22 Sones, Independently tested
22. Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
23. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
24. Rolling Load Limit:	≤ 450 lbs. / sq. inch, with no forklift traffic
25. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss
26. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 913.1 lbs. per sq. inch
27. Oil & Grease Resistance:	No
28. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
29. Light Resistance: Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
30. Static Generation (AATCC 134):	< 2000 Volts at 20% RH
31. Thermal Transmission (ASTM C518):	R-value of 0.04
32. Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
33. Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
34. Stain Removal:	Samples of the product shall be provided for stain removal testing by the owner. Sample size shall be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples shall have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing shall consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period shall be no less than one week. Removal of chemicals shall be in accordance with manufacturers published cleaning and maintenance recommendations.
35. Substrate Preparation:	Per ASTM F710 and the nora <sup>®</sup> Installation Guide

- I. Rubber Sheet Floor Covering:
1. Product Name: **noraplan<sup>®</sup> sentica 3.0 mm, Article 1701**
  2. ASTM Specification: Type I  
ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing
  3. Limited Wear Warranty: 5 years
  4. Material: nora<sup>®</sup> vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
  5. Composition: Homogeneous rubber compound with a random scattered design
  6. Color: 38 standard colors
  7. Surface: Smooth
  8. Back of Sheet: Double-sanded smooth
  9. Material Dimensions (ASTM F1859): 39.37 feet by 48 inches (12m by 1.22m), ≥ amount specified
  10. Thickness (ASTM F386): 0.12 inches (3mm)  
± 0.006 inches (± 0.15mm) is required
  11. Dimensional Stability (ASTM F2199): Meets requirements  
≤ 0.15% in both directions is required
  12. Flammability (E648/NFPA 253): NBSIR 75 950, 1.03  
≥ 0.45 watts/sq. cm for Class 1 is required
  13. Smoke Density (ASTM E662/NFPA 258): NBS, 376 (flaming) and 256 (non-flaming)  
< 450 is required
  14. CAN/ULC-S102.2: Surface Burning, FSC1 of 125 and SD of 370
  15. Burn Resistance: Resistant to cigarette and solder burns
  16. Slip Resistance (ASTM D2047): Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.91  
≥ 0.5 is required (not recommended for ramps)
  17. Bacteria Resistance (ASTM E2180/ASTM G21): Resistant to bacteria, fungi, and micro-organism activity
  18. VOC's: This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
  19. Latex Allergies (ASTM D6499): Inhibition Elisa, results are below detection level
  20. Sound Absorption (ASTM E2179/ISO 140): Δ IIC 14, Δ Lw 10dB (compare only Δ values)
  21. Sound Generation: 67.2 dBA, 68.9 dBC and 20.9 Sones, Independently tested
  22. Hardness (ASTM D2240): Shore type "A", 92  
≥ 85 is required
  23. Static Load (ASTM F970): Residual compression of 0.003 inches with 800 lbs.  
≤ 0.005 inches with 250 lbs. is required
  24. Rolling Load Limit: ≤ 550 lbs. / sq. inch, with no forklift traffic
  25. Abrasion Resistance (ASTM D3389): 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.003 oz. (0.09g) weight loss  
≤ 0.035 oz. (1.0g) is required
  26. Elongation (ASTM D412): Modulus @ 10% is 1,299.0 lbs. per sq. inch  
≥ 300 lbs. per sq. inch is required
  27. Oil & Grease Resistance: No

- 28. Heat Resistance (ASTM F1514):  
Avg.  $\Delta E \leq 8.0$  is required Easily achieved with all batches and regular maintenance
- 29. Light Resistance:  
Avg.  $\Delta E \leq 8.0$  is required Easily achieved with all batches and regular maintenance
- 30. Static Generation (AATCC 134): < 2000 Volts at 20% RH
- 31. Thermal Transmission (ASTM C518): R-value of 0.04
- 32. Cleaning: Cleaned and maintained effectively using water, nora<sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
- 33. Shine: Higher shine achieved by buffing without any artificial topical applied coatings.
- 34. Stain Removal: Samples of the product shall be provided for stain removal testing by the owner. Sample size shall be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples shall have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing shall consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period shall be no less than one week. Removal of chemicals shall be in accordance with manufacturers published cleaning and maintenance recommendations.
- 35. Substrate Preparation: Per ASTM F710 and the nora<sup>®</sup> Installation Guide

J. Rubber Sheet Floor Covering:

- 1. Product Name: **noraplan<sup>®</sup> stone, Article 0149 & 1600**
- 2. ASTM Specification: Type I  
ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing
- 3. Limited Wear Warranty: 5 years
- 4. Material: nora<sup>®</sup> vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
- 5. Composition: Homogeneous rubber compound with a random scattered design
- 6. Color: 20 standard colors (Article 0149); 8 standard colors (Article 1600)
- 7. Surface: Slightly textured (Article 0149); Smooth (Article 1600)
- 8. Back of Sheet: Double-sanded smooth
- 9. Material Dimensions (ASTM F1859): 49.21 feet by 48 inches (15m by 1.22m),  $\geq$  amount specified
- 10. Thickness (ASTM F386): 0.08 inches (2mm)  
 $\pm 0.006$  inches ( $\pm 0.15$ mm) is required
- 11. Dimensional Stability (ASTM F2199): Meets requirements



- ≤ 0.15% in both directions is required
12. Flammability (E648/NFPA 253):  
≥ 0.45 watts/sq. cm for Class 1 is required NBSIR 75 950, 0.97
  13. Smoke Density (ASTM E662/NFPA 258):  
< 450 is required NBS, 196 (flaming) and 207 (non-flaming)
  14. CAN/ULC-S102.2: Surface Burning, FSC1 of 125 and SD of 370
  15. Burn Resistance: Resistant to cigarette and solder burns
  16. Slip Resistance (ASTM D2047):  
≥ 0.5 is required Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.90 (not recommended for ramps)
  17. Bacteria Resistance (ASTM E2180/ASTM G21): Resistant to bacteria, fungi, and micro-organism activity
  18. VOC's: This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
  19. Latex Allergies (ASTM D6499): Inhibition Elisa, results are below detection level
  20. Sound Absorption (ASTM E2179/ISO 140): Δ IIC 11, Δ Lw 8dB (compare only Δ values)
  21. Sound Generation: 67.9 dBA, 69.9 dBC and 22 Sones, Independently tested
  22. Hardness (ASTM D2240):  
≥ 85 is required Shore type "A", 92
  23. Static Load (ASTM F970):  
≤ 0.005 inches with 250 lbs. is required Residual compression of 0.003 inches with 800 lbs.
  24. Rolling Load Limit: ≤ 450 lbs. / sq. inch, with no forklift traffic
  25. Abrasion Resistance (ASTM D3389):  
≤ 0.035 oz. (1.0g) is required 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss
  26. Elongation (ASTM D412):  
≥ 300 lbs. per sq. inch is required Modulus @ 10% is 913.1 lbs. per sq. inch
  27. Oil & Grease Resistance: No
  28. Heat Resistance (ASTM F1514):  
Avg. ΔE ≤ 8.0 is required Easily achieved with all batches and regular maintenance
  29. Light Resistance: Easily achieved with all batches and regular maintenance  
Avg. ΔE ≤ 8.0 is required
  30. Static Generation (AATCC 134): < 2000 Volts at 20% RH
  31. Thermal Transmission (ASTM C518): R-value of 0.04
  32. Cleaning: Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
  33. Shine: Higher shine achieved by buffing without any artificial topical applied coatings.
  34. Stain Removal: Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and

chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.

35. Substrate Preparation:

Per ASTM F710 and the nora® Installation Guide

K. Rubber Sheet Floor Covering:

- |   |   |
|---|---|
| 1. Product Name:  | <b>noraplan® unita, Articles 1640 (granite chips) &amp; 1650 (glitter granite chips)</b>  |
| 2. ASTM Specification:<br>ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing | Type I  |
| 3. Limited Wear Warranty:   | 5 years   |
| 4. Material:  | nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous rubber compound with a random dispersed glitter and/or granite chips  |
| 6. Color:   | 12 standard colors (Article 1640); 4 standard colors (Article 1650)   |
| 7. Surface:   | Smooth  |
| 8. Back of Sheet:   | Double-sanded smooth  |
| 9. Material Dimensions (ASTM F1859):  | 49.21 feet by 48 inches (15m by 1.22m), ≥ amount specified  |
| 10. Thickness (ASTM F386):<br>± 0.006 inches (± 0.15mm) is required   | 0.08 inches (2mm)   |
| 11. Dimensional Stability (ASTM F2199):<br>≤ 0.15% in both directions is required                           | Meets requirements  |
| 12. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required                            | NBSIR 75 950, 0.98  |
| 13. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required  | NBS, 210 (flaming) and 161 (non-flaming)  |
| 14. Burn Resistance:  | Resistant to cigarette and solder burns   |
| 15. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required  | Static coefficient of friction, Neolite dry 0.98, Neolite wet 0.94 (not recommended for ramps)  |
| 16. Bacteria Resistance (ASTM E2180/ASTM G21):  | Resistant to bacteria, fungi, and micro-organism activity   |
| 17. VOC's:  | This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant   |
| 18. Latex Allergies (ASTM D6499):   | Inhibition Elisa, results are below detection level   |
| 19. Sound Absorption (ASTM E2179/ISO 140):  | Δ IIC 11, Δ Lw 9dB (compare only Δ values)  |
| 20. Hardness (ASTM D2240):<br>≥ 85 is required  | Shore type "A", 92  |
| 21. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required                                    | Residual compression of 0.003 inches with 800 lbs.  |
| 22. Rolling Load Limit:   | ≤ 450 lbs. / sq. inch, with no forklift traffic   |

- 23. Abrasion Resistance (ASTM D3389):  
≤ 0.035 oz. (1.0g) is required 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.007 oz. (0.2g) weight loss
- 24. Elongation (ASTM D412):  
≥ 300 lbs. per sq. inch is required Modulus @ 10% is 913.1 lbs. per sq. inch
- 25. Oil & Grease Resistance: No
- 26. Heat Resistance (ASTM F1514):  
Avg. ΔE ≤ 8.0 is required Easily achieved with all batches and regular maintenance
- 27. Light Resistance:  
Avg. ΔE ≤ 8.0 is required Easily achieved with all batches and regular maintenance
- 28. Static Generation (AATCC 134): < 2000 Volts at 20% RH
- 29. Thermal Transmission (ASTM C518): R-value of 0.04
- 30. Cleaning: Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
- 31. Stain Removal: Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.
- 32. Substrate Preparation: Per ASTM F710 and the nora® Installation Guide

L. Rubber Sheet Floor Covering:

- 1. Product Name: **noraplan® valua 2.0 mm, Articles 172A & 174A**
- 2. ASTM Specification:  
ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing Type I
- 3. Limited Wear Warranty: 5 years
- 4. Material: nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
- 5. Composition: Homogeneous rubber compound with marbleized design
- 6. Color: 8 standard colors (Article 172A); 24 standard colors (Article 174A)
- 7. Surface: Linear structured
- 8. Back of Sheet: Double-sanded smooth
- 9. Material Dimensions (ASTM F1859): 49.21 feet by 48 inches (15m by 1.22m), ≥ amount specified

10. Thickness (ASTM F386): ± 0.005 inches (± 0.127mm) is required	0.08 inches (2mm)
11. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
12. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.98
13. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 134 (flaming) and 109 (non-flaming)
14. Burn Resistance:	Resistant to cigarette and solder burns
15. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Rubber dry 0.97, Rubber wet 0.85 (not recommended for ramps)
16. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
17. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
18. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
19. Sound Absorption (ISO 140):	Δ Lw 8dB (compare only Δ values)
20. Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
21. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.002 inches with 800 lbs.
22. Rolling Load Limit:	≤ 450 lbs. / sq. inch, with no forklift traffic
23. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.006 oz. (0.17g) weight loss
24. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 913.1 lbs. per sq. inch
25. Oil & Grease Resistance:	No
26. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
27. Light Resistance: Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
28. Static Generation (AATCC 134):	< 2000 Volts at 20% RH, achieved
29. Thermal Transmission (ASTM C518):	R-value of 0.04
30. Cleaning:	Cleaned and maintained effectively without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
31. Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
32. Stain Removal:	Samples of the product shall be provided for stain removal testing by the owner. Sample size shall be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples shall have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing shall consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene

Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period shall be no less than one week. Removal of chemicals shall be in accordance with manufacturers published cleaning and maintenance recommendations.

33. Substrate Preparation:

Per ASTM F710 and the nora® Installation Guide

M. Rubber Sheet Floor Covering:

- |   |   |
|---|---|
| 1. Product Name:  | <b>noraplan® valua 3.0 mm, Articles 173A &amp; 175A</b>   |
| 2. ASTM Specification:<br>ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing | Type I  |
| 3. Limited Wear Warranty:   | 5 years   |
| 4. Material:  | nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous rubber compound with marbleized design  |
| 6. Color:   | 8 standard colors (Article 173A); 24 standard colors (Article 175A)   |
| 7. Surface:   | Linear structured   |
| 8. Back of Sheet:   | Double-sanded smooth  |
| 9. Material Dimensions (ASTM F1859):  | 39.37 feet by 48 inches (12m by 1.22m), ≥ amount specified  |
| 10. Thickness (ASTM F386):<br>± 0.006 inches (± 0.15mm) is required   | 0.12 inches (3.0mm)   |
| 11. Dimensional Stability (ASTM F2199):<br>≤ 0.15% in both directions is required                           | Meets requirements  |
| 12. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required                            | NBSIR 75 950, 1.08  |
| 13. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required  | NBS, 360 (flaming) and 203 (non-flaming)  |
| 14. Burn Resistance:  | Resistant to cigarette and solder burns   |
| 15. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required  | Static coefficient of friction, Rubber dry 0.97, Rubber wet 0.85 (not recommended for ramps)  |
| 16. Bacteria Resistance (ASTM E2180/ASTM G21):  | Resistant to bacteria, fungi, and micro-organism activity   |
| 17. VOC's:  | This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant   |
| 18. Latex Allergies (ASTM D6499):   | Inhibition Elisa, results are below detection level   |
| 19. Sound Absorption (ISO 140):   | Δ Lw 10dB (compare only Δ values)   |
| 20. Hardness (ASTM D2240):<br>≥ 85 is required  | Shore type "A", 92  |
| 21. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required                                    | Residual compression of 0.003 inches with 800 lbs.  |
| 22. Rolling Load Limit:   | ≤ 550 lbs. / sq. inch, with no forklift traffic   |
| 23. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required                                     | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.006 oz. (0.17g) weight loss  |

- |  |   |
|--|---|
| 24. Elongation (ASTM D412):<br>≥ 300 lbs. per sq. inch is required | Modulus @ 10% is 1,299.0 lbs. per sq. inch  |
| 25. Oil & Grease Resistance:                                       | No  |
| 26. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required     | Easily achieved with all batches and regular maintenance  |
| 27. Light Resistance:<br>Avg. ΔE ≤ 8.0 is required                 | Easily achieved with all batches and regular maintenance  |
| 28. Static Generation (AATCC 134):                                 | < 2000 Volts at 20% RH  |
| 29. Thermal Transmission (ASTM C518):                              | R-value of 0.04   |
| 30. Cleaning:  | Cleaned and maintained effectively without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 31. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.   |
| 32. Stain Removal:   | Samples of the product shall be provided for stain removal testing by the owner. Sample size shall be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples shall have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing shall consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period shall be no less than one week. Removal of chemicals shall be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 33. Substrate Preparation:   | Per ASTM F710 and the nora® Installation Guide  |

## 2.7 RESILIENT SHEET FLOORING FOR COMMERCIAL TRAFFIC WITH PRE-APPLIED ADHESIVE

- |   |   |
|---|---|
| A. Rubber Sheet Floor Covering (nora® nTx):   |   |
| 1. Product Name:  | <b>noraplan® eco nTx, Article 158A</b>  |
| 2. ASTM Specification:<br>ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing | Type I  |
| 3. Limited Wear Warranty:   | 5 years   |
| Limited Bond Warranty:  | 10 years  |
| 4. Material:  | nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous rubber compound with a random scattered design  |
| 6. Color:   | 16 colors; minimum order quantities apply   |
| 7. Surface:   | Smooth  |
| 8. Back of Sheet:   | nora® nTx pre-applied adhesive  |

9.	Material Dimensions (ASTM F1859):	48.55 feet by 48 inches (14.8m by 1.22m), ≥ amount specified
10.	Thickness (ASTM F386): ± 0.006 inches (± 0.15mm) is required	0.08 inches (2.0mm)
11.	Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
12.	Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.88
13.	Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 199 (flaming) and 120 (non-flaming)
14.	CAN/ULC-S102.2:	Surface Burning, FSC1 of 300 and SD of 1200
15.	Burn Resistance:	Resistant to cigarette and solder burns
16.	Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.90
17.	Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
18.	VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
19.	Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20.	Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 11, Δ Lw 8 dB (compare only Δ values)
21.	Sound Generation:	67.9 dBA, 69.9 dBC and 22 Sones, Independently tested
22.	Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
23.	Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.002 inches with 800 lbs.
24.	Rolling Load Limit:	Rolling Load Limit: ≤ 450 lbs. / sq. inch, with no forklift traffic
25.	Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss
26.	Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 913.1 lbs. per sq. inch
27.	Oil & Grease Resistance:	No
28.	Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
29.	Light Resistance: Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
30.	Static Generation (AATCC 134):	< 2000 Volts at 20% RH
31.	Thermal Transmission (ASTM C518):	R-value of 0.04
32.	Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
33.	Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
34.	Stain Removal:	Samples of the product must be provided for stain removal

testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.

35. Substrate Preparation:

As per the nora® nTx Installation Guide

B. Rubber Sheet Floor Covering (nora® nTx):

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|---|---|
| 1. Product Name:  | <b>noraplan environcare™ nTx 2.0 mm, Article 156A</b>   |
| 2. ASTM Specification:<br>ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing | Type I  |
| 3. Limited Wear Warranty:   | 5 years   |
| Limited Bond Warranty:  | 10 years  |
| 4. Material:  | nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous rubber compound with a random scattered design  |
| 6. Color:   | 5 standard colors; additional colors available with minimum order   |
| 7. Surface:   | Smooth  |
| 8. Back of Sheet:   | nora® nTx pre-applied adhesive  |
| 9. Material Dimensions (ASTM F1859):  | 48.55 feet by 48 inches (14.8m by 1.22m), ≥ amount specified  |
| 10. Thickness (ASTM F386):<br>± 0.006 inches (± 0.15mm) is required   | 0.08 inches (2.0mm)   |
| 11. Dimensional Stability (ASTM F2199):<br>≤ 0.15% in both directions is required                           | Meets requirements  |
| 12. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required                            | NBSIR 75 950, 0.88  |
| 13. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required  | NBS, 199 (flaming) and 120 (non-flaming)  |
| 14. CAN/ULC-S102.2:   | Surface Burning, FSC1 of 300 and SD of 1200   |
| 15. Burn Resistance:  | Resistant to cigarette and solder burns   |
| 16. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required  | Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.90 (not recommended for ramps)  |
| 17. Bacteria Resistance (ASTM E2180/ASTM G21):  | Resistant to bacteria, fungi, and micro-organism activity   |
| 18. VOC's:  | This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant   |



- |  |   |
|--|---|
| 19. Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level   |
| 20. Sound Absorption (ASTM E2179/ISO 140):                               | Δ IIC 11, Δ Lw 8 dB (compare only Δ values)   |
| 21. Sound Generation:  | 67.9 dBA, 69.9 dBC and 22 Sones, Independently tested   |
| 22. Hardness (ASTM D2240):<br>≥ 85 is required                           | Shore type "A", 92  |
| 23. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.002 inches with 800 lbs.  |
| 24. Rolling Load Limit:  | ≤ 450 lbs. / sq. inch, with no forklift traffic   |
| 25. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss  |
| 26. Elongation (ASTM D412):<br>≥ 300 lbs. per sq. inch is required       | Modulus @ 10% is 913.1 lbs. per sq. inch  |
| 27. Oil & Grease Resistance:   | No  |
| 28. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance  |
| 29. Light Resistance:<br>Avg. ΔE ≤ 8.0 is required                       | Easily achieved with all batches and regular maintenance  |
| 30. Static Generation (AATCC 134):                                       | < 2000 Volts at 20% RH  |
| 31. Thermal Transmission (ASTM C518):                                    | R-value of 0.04   |
| 32. Cleaning:  | Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 33. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.   |
| 34. Stain Removal:   | Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 35. Substrate Preparation:   | As per the nora® nTx Installation Guide   |

C. Rubber Sheet Floor Covering (nora® nTx):

1. Product Name:
2. ASTM Specification:  
ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing

**noraplan environcare™ nTx 3.0 mm, Article 157A**  
Type I

3. Limited Wear Warranty:	5 years
Limited Bond Warranty:	10 years
4. Material:	nora <sup>®</sup> vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5. Composition:	Homogeneous rubber compound with a random scattered design
6. Color:	5 standard colors; additional colors available with minimum order
7. Surface:	Smooth
8. Back of Sheet:	nora <sup>®</sup> nTx pre-applied adhesive
9. Material Dimensions (ASTM F1859):	39.37 feet by 48 inches (11.8m by 1.22m), ≥ amount specified
10. Thickness (ASTM F386): ± 0.006 inches (± 0.15mm) is required	0.12 inches (3.0mm)
11. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
12. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.82
13. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 282 (flaming) and 155 (non-flaming)
14. CAN/ULC-S102.2:	Surface Burning, FSC1 of 200 and SD of 1850
15. Burn Resistance:	Resistant to cigarette and solder burns
16. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.91 (not recommended for ramps)
17. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
18. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
19. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20. Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 14, Δ Lw 10 dB (compare only Δ values)
21. Sound Generation:	67.2 dBA, 68.9 dBC and 20.9 Sones, Independently tested
22. Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
23. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
24. Rolling Load Limit:	≤ 550 lbs. / sq. inch, with no forklift traffic
25. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.003 oz. (0.09g) weight loss
26. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 1,299.0 lbs. per sq. inch
27. Oil & Grease Resistance:	No
28. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
29. Light Resistance: Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance

- 30. Static Generation (AATCC 134): < 2000 Volts at 20% RH
- 31. Thermal Transmission (ASTM C518): R-value of 0.04
- 32. Cleaning: Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
- 33. Shine: Higher shine achieved by buffing without any artificial topical applied coatings.
- 34. Stain Removal: Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.
- 35. Substrate Preparation: As per the nora® nTx Installation Guide

D. Rubber Sheet Floor Covering (nora® nTx):

- 1. Product Name: **noraplan® Iona nTx 2.0 mm, Article 190B**
- 2. ASTM Specification: ASTM F1859  
Standard Specification for Rubber Sheet Floor Covering Without Backing  
Type I
- 3. Limited Wear Warranty: 5 years  
Limited Bond Warranty: 10 years
- 4. Material: nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
- 5. Composition: Heterogeneous rubber compound
- 6. Color: 24 standard colors
- 7. Surface: Textured surface
- 8. Back of Sheet: nora® nTx pre-applied adhesive
- 9. Material Dimensions (ASTM F1859): 48.55 feet by 48 inches (14.8m by 1.22m), ≥ amount specified
- 10. Thickness (ASTM F386): 0.08 inches (2mm)  
± 0.006 inches (± 0.15mm) is required
- 11. Dimensional Stability (ASTM F2199): Meets requirements  
≤ 0.15% in both directions is required
- 12. Flammability (E648/NFPA 253): 0.93 watts/sq.  
≥ 0.45 watts/sq. cm for Class 1 is required
- 13. Smoke Density (ASTM E662/NFPA 258): 186 non-flaming; 152 flaming

	< 450 is required	
14.	CAN/ULC-S102.2:	FSV125 SDV370
15.	Burn Resistance:	Resistant to cigarette and solder burns
16.	Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.92, Neolite wet 0.91 (not recommended for ramps)
17.	Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi and micro-organism activity
18.	VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
19.	Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20.	Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 11, Δ Lw 8dB (compare only Δ values)
21.	Sound Generation:	67.9 dBA, 69.9 dBC and 22 Sones, Independently tested
22.	Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
23.	Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
24.	Rolling Load Limit:	≤ 450 lbs. / sq. inch, with no forklift traffic
25.	Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss
26.	Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 913.1 lbs. per sq. inch
27.	Oil & Grease Resistance:	No
28.	Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
29.	Light Resistance (ASTM F1515): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
30.	Static Generation (AATCC 134/ANSI ESD S97.2):	< 2000 Volts at 20% RH
31.	Thermal Transmission (ASTM C518):	R-value of 0.04
32.	Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
33.	Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance

<p>34. Substrate Preparation:</p> <p>E. Rubber Sheet Floor Covering (nora<sup>®</sup> nTx):</p> <ol style="list-style-type: none"> <li>1. Product Name:</li> <li>2. ASTM Specification: ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing</li> <li>3. Limited Wear Warranty: Limited Bond Warranty:</li> <li>4. Material:</li> <li>5. Composition:</li> <li>6. Color:</li> <li>7. Surface:</li> <li>8. Back of Sheet:</li> <li>9. Material Dimensions (ASTM F1859):</li> <li>10. Thickness (ASTM F386): ± 0.006 inches (± 0.15mm) is required</li> <li>11. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required</li> <li>12. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required</li> <li>13. Smoke Density (ASTM E662/NFPA 258): &lt; 450 is required</li> <li>14. CAN/ULC-S102.2:</li> <li>15. Burn Resistance:</li> <li>16. Slip Resistance (ASTM D2047): ≥ 0.5 is required</li> <li>17. Bacteria Resistance (ASTM E2180/ASTM G21):</li> <li>18. VOC's:</li> <li>19. Latex Allergies (ASTM D6499):</li> <li>20. Sound Absorption (ASTM E2179/ISO 140):</li> <li>21. Sound Generation:</li> <li>22. Hardness (ASTM D2240): ≥ 85 is required</li> <li>23. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required</li> <li>24. Rolling Load Limit:</li> <li>25. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required</li> </ol>	<p>recommendations.</p> <p>As per the nora<sup>®</sup> nTx Installation Guide</p> <p><b>noraplan<sup>®</sup> Iona nTx 3.0 mm, Article 191B</b></p> <p>Type I</p> <p>5 years 10 years</p> <p>nora<sup>®</sup> vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury</p> <p>Heterogeneous rubber compound</p> <p>24 standard colors</p> <p>Textured surface</p> <p>nora<sup>®</sup> nTx pre-applied adhesive</p> <p>38.71 feet by 48 inches (11.8m by 1.22m), ≥ amount specified</p> <p>0.12 inches (3mm)</p> <p>Meets requirements</p> <p>1.09 watts/sq.</p> <p>246 non-flaming, 150 flaming</p> <p>FSC125 SDC370</p> <p>Resistant to cigarette and solder burns</p> <p>Static coefficient of friction, Neolite dry 0.97, Neolite wet 0.94 (not recommended for ramps)</p> <p>Resistant to bacteria, fungi and micro-organism activity</p> <p>This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant</p> <p>Inhibition Elisa, results are below detection level</p> <p>Δ IIC 14, Δ Lw 10dB (compare only Δ values)</p> <p>67.2 dBA, 68.9 dBC and 20.9 Sones, Independently tested</p> <p>Shore type "A", 92</p> <p>Residual compression of 0.003 inches with 800 lbs.</p> <p>≤ 550 lbs. / sq. inch, with no forklift traffic</p> <p>1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.003 oz. (0.09g) weight loss</p>
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| 26. Elongation (ASTM D412):<br>≥ 300 lbs. per sq. inch is required | Modulus @ 10% is 1,299.0 lbs. per sq. inch  |
| 27. Oil & Grease Resistance:                                       | No  |
| 28. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required     | Easily achieved with all batches and regular maintenance  |
| 29. Light Resistance (ASTM F1515):<br>Avg. ΔE ≤ 8.0 is required    | Easily achieved with all batches and regular maintenance  |
| 30. Static Generation (AATCC 134/ANSI ESD S97.2):                  | < 2000 Volts at 20% RH  |
| 31. Thermal Transmission (ASTM C518):                              | R-value of 0.04   |
| 32. Cleaning:  | Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 33. Stain Removal:   | Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 34. Substrate Preparation:   | As per the nora® nTx Installation Guide   |

F. Rubber Sheet Floor Covering (nora® nTx):

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|---|---|
| 1. Product Name:  | <b>noraplan® sentica nTx 2.0 mm, Article 1633</b>   |
| 2. ASTM Specification:<br>ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing | Type I  |
| 3. Limited Wear Warranty:<br>Limited Bond Warranty:   | 5 years<br>10 years   |
| 4. Material:  | nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous rubber compound with a random scattered design  |
| 6. Color:   | 5 standard colors; additional colors available with minimum order   |
| 7. Surface:   | Smooth  |
| 8. Back of Sheet:   | nora® nTx pre-applied adhesive  |

9. Material Dimensions (ASTM F1859):	48.55 feet by 48 inches (14.8m by 1.22m), ≥ amount specified
10. Thickness (ASTM F386): ± 0.006 inches (± 0.15mm) is required	0.08 inches (2.0mm)
11. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
12. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.88
13. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 199 (flaming) and 120 (non-flaming)
14. CAN/ULC-S102.2:	Surface Burning, FSC1 of 300 and SD of 1200
15. Burn Resistance:	Resistant to cigarette and solder burns
16. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.90 (not recommended for ramps)
17. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
18. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
19. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20. Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 11, Δ Lw 8 dB (compare only Δ values)
21. Sound Generation:	67.9 dBA, 69.9 dBC and 22 Sones, Independently tested
22. Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
23. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.002 inches with 800 lbs.
24. Rolling Load Limit:	≤ 450 lbs. / sq. inch, with no forklift traffic
25. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss
26. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 913.1 lbs. per sq. inch
27. Oil & Grease Resistance:	No
28. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
29. Light Resistance: Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
30. Static Generation (AATCC 134):	< 2000 Volts at 20% RH
31. Thermal Transmission (ASTM C518):	R-value of 0.04
32. Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
33. Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
34. Stain Removal:	Samples of the product must be provided for stain removal

testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.

35. Substrate Preparation:

As per the nora® nTx Installation Guide

G. Rubber Sheet Floor Covering (nora® nTx):

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|---|---|
| 1. Product Name:  | <b>noraplan® sentica nTx 3.0 mm, Article 155A</b>   |
| 2. ASTM Specification:<br>ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing | Type I  |
| 3. Limited Wear Warranty:   | 5 years   |
| Limited Bond Warranty:  | 10 years  |
| 4. Material:  | nora® vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous rubber compound with a random scattered design  |
| 6. Color:   | 5 standard colors; additional colors available with minimum order   |
| 7. Surface:   | Smooth  |
| 8. Back of Sheet:   | nora® nTx pre-applied adhesive  |
| 9. Material Dimensions (ASTM F1859):  | 38.71 feet by 48 inches (11.8m by 1.22m), ≥ amount specified  |
| 10. Thickness (ASTM F386):<br>± 0.006 inches (± 0.15mm) is required   | 0.12 inches (3.0mm)   |
| 11. Dimensional Stability (ASTM F2199):<br>≤ 0.15% in both directions is required                           | Meets requirements  |
| 12. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required                            | NBSIR 75 950, 0.82  |
| 13. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required  | NFPA 258; NBS, 282 (flaming) and 155 (non-flaming)  |
| 14. CAN/ULC-S102.2:   | Surface Burning, FSC1 of 200 and SD of 1850   |
| 15. Burn Resistance:  | Resistant to cigarette and solder burns   |
| 16. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required  | Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.91 (not recommended for ramps)  |
| 17. Bacteria Resistance (ASTM E2180/ASTM G21):  | Resistant to bacteria, fungi, and micro-organism activity   |
| 18. VOC's:  | This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant   |



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| 19. Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level   |
| 20. Sound Absorption (ASTM E2179/ISO 140):                               | $\Delta$ IIC 14, $\Delta$ Lw 10 dB (compare only $\Delta$ values)   |
| 21. Sound Generation:  | 67.2 dBA, 68.9 dBC and 20.9 Sones, Independently tested   |
| 22. Hardness (ASTM D2240):<br>≥ 85 is required                           | Shore type "A", 92 achieved, ≥ 85 is required   |
| 23. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.003 inches with 800 lbs.  |
| 24. Rolling Load Limit:  | ≤ 550 lbs. / sq. inch, with no forklift traffic   |
| 25. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.003 oz. (0.09g) weight loss  |
| 26. Elongation (ASTM D412):<br>≥ 300 lbs. per sq. inch is required       | Modulus @ 10% is 1,299.0 lbs. per sq. inch  |
| 27. Oil & Grease Resistance:   | No  |
| 28. Heat Resistance (ASTM F1514):<br>Avg. $\Delta$ E ≤ 8.0 is required   | Easily achieved with all batches and regular maintenance  |
| 29. Light Resistance:<br>Avg. $\Delta$ E ≤ 8.0 is required               | Easily achieved with all batches and regular maintenance  |
| 30. Static Generation (AATCC 134):                                       | < 2000 Volts at 20% RH, achieved  |
| 31. Thermal Transmission (ASTM C518):                                    | R-value of 0.04   |
| 32. Cleaning:  | Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 33. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.   |
| 34. Stain Removal:   | Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 35. Substrate Preparation:   | As per the nora <sup>®</sup> nTx Installation Guide   |

H. Rubber Sheet Floor Covering (nora<sup>®</sup> nTx):

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|---|---|
| 1. Product Name:  | <b>noraplan<sup>®</sup> stone nTx, Article 145A</b> |
| 2. ASTM Specification:<br>ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing | Type I  |

3. Limited Wear Warranty:	5 years
Limited Bond Warranty:	10 years
4. Material:	nora <sup>®</sup> vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5. Composition:	Homogeneous rubber compound with a non-directional scattered granulate design
6. Color:	20 colors; minimum order quantities apply
7. Surface:	Slightly textured
8. Back of Sheet:	nora <sup>®</sup> nTx pre-applied adhesive
9. Material Dimensions (ASTM F1859):	48.55 feet by 48 inches (14.8m by 1.22m), ≥ amount specified
10. Thickness (ASTM F386): ± 0.006 inches (± 0.15mm) is required	0.08 inches (2.0mm)
11. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
12. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.88
13. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 199 (flaming) and 120 (non-flaming)
14. CAN/ULC-S102.2:	Surface Burning, FSC1 of 300 and SD of 1200
15. Burn Resistance:	Resistant to cigarette and solder burns
16. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.90
17. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
18. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
19. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20. Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 11, Δ Lw 8 dB (compare only Δ values)
21. Sound Generation:	67.9 dBA, 69.9 dBC and 22 Sones, Independently tested
22. Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
23. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.002 inches with 800 lbs.
24. Rolling Load Limit:	Rolling Load Limit: ≤ 450 lbs. / sq. inch, with no forklift traffic
25. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.008 oz. (0.24g) weight loss
26. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 913.1 lbs. per sq. inch
27. Oil & Grease Resistance:	No
28. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
29. Light Resistance: Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
30. Static Generation (AATCC 134):	< 2000 Volts at 20% RH

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| 31. Thermal Transmission (ASTM C518):   | R-value of 0.04   |
| 32. Cleaning:   | Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 33. Shine:  | Higher shine achieved by buffing without any artificial topical applied coatings.   |
| 34. Stain Removal:  | Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 35. Substrate Preparation:  | As per the nora <sup>®</sup> nTx Installation Guide   |
| <b>I. Rubber Sheet Floor Covering (nora<sup>®</sup> nTx):</b>   |   |
| 1. Product Name:  | <b>noraplan<sup>®</sup> unita nTx, Articles 1698 &amp; 1699</b>   |
| 2. ASTM Specification:<br>ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing | Type I  |
| 3. Limited Wear Warranty:   | 5 years   |
| Limited Bond Warranty:  | 10 years  |
| 4. Material:  | nora <sup>®</sup> vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury   |
| 5. Composition:   | Homogeneous rubber compound with a random dispersed glitter and or granite chips  |
| 6. Color:   | 12 colors (Article 1698); 4 colors (1699); minimum order quantities apply   |
| 7. Surface:   | Smooth  |
| 8. Back of Sheet:   | nora <sup>®</sup> nTx pre-applied adhesive  |
| 9. Material Dimensions (ASTM F1859):  | 48.55 feet by 48 inches (14.8m by 1.22m), ≥ amount specified  |
| 10. Thickness (ASTM F386):<br>± 0.006 inches (± 0.15mm) is required   | 0.08 inches (2.0mm)   |
| 11. Dimensional Stability (ASTM F2199):<br>≤ 0.15% in both directions is required                           | Meets requirements  |
| 12. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required                            | NBSIR 75 950, 0.88  |

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| 13. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required             | NBS, 199 (flaming) and 120 (non-flaming)  |
| 14. Burn Resistance:   | Resistant to cigarette and solder burns   |
| 15. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                   | Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.90<br>(not recommended for ramps)   |
| 16. Bacteria Resistance (ASTM E2180/ASTM G21):                           | Resistant to bacteria, fungi, and micro-organism activity   |
| 17. VOC's:   | VOC's: This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant  |
| 18. Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level   |
| 19. Sound Absorption (ASTM E2179/ISO 140):                               | Δ IIC 11, Δ Lw 9dB (compare only Δ values)  |
| 20. Hardness (ASTM D2240):<br>≥ 85 is required                           | Shore type "A", 92  |
| 21. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.003 inches with 800 lbs.  |
| 22. Rolling Load Limit:  | ≤ 450 lbs. / sq. inch, with no forklift traffic   |
| 23. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.007 oz. (0.2g) weight loss   |
| 24. Elongation (ASTM D412):<br>≥ 300 lbs. per sq. inch is required       | Modulus @ 10% is 913.1 lbs. per sq. inch  |
| 25. Oil & Grease Resistance:   | No  |
| 26. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance  |
| 27. Light Resistance:<br>Avg. ΔE ≤ 8.0 is required                       | Easily achieved with all batches and regular maintenance  |
| 28. Static Generation (AATCC 134):                                       | < 2000 Volts at 20% RH  |
| 29. Thermal Transmission (ASTM C518):                                    | R-value of 0.04   |
| 30. Cleaning:  | Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 31. Stain Removal:   | Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 32. Substrate Preparation:   | As per the nora <sup>®</sup> nTx Installation Guide   |

J. Rubber Sheet Floor Covering (nora <sup>®</sup> nTx):	
1. Product Name:	<b>noraplan<sup>®</sup> valua nTx 2.0 mm, Articles 111B &amp; 113B</b>
2. ASTM Specification: ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing	Type I
3. Limited Wear Warranty:	5 years
Limited Bond Warranty:	10 years
4. Material:	nora <sup>®</sup> vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5. Composition:	Homogeneous rubber compound with a random scattered design
6. Color:	8 colors (Article 111B); 24 colors (Article 113B); minimum order quantities apply
7. Surface:	Smooth
8. Back of Sheet:	nora <sup>®</sup> nTx pre-applied adhesive
9. Material Dimensions (ASTM F1859):	48.55 feet by 48 inches (14.8m by 1.22m), ≥ amount specified
10. Thickness (ASTM F386): ± 0.006 inches (± 0.15mm) is required	0.08 inches (2.0mm)
11. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
12. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.98
13. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 134 (flaming) and 109 (non-flaming)
14. Burn Resistance:	Resistant to cigarette and solder burns
15. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Rubber dry 0.97, Rubber wet 0.85 (not recommended for ramps)
16. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
17. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
18. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
19. Sound Absorption (ISO 140):	Δ Lw 8dB (compare only Δ values)
20. Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
21. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.002 inches with 800 lbs.
22. Rolling Load Limit:	≤ 450 lbs. / sq. inch, with no forklift traffic
23. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.006 oz. (0.17g) weight loss
24. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 913.1 lbs. per sq. inch
25. Oil & Grease Resistance:	No

- 26. Heat Resistance (ASTM F1514):  
Avg.  $\Delta E \leq 8.0$  is required Easily achieved with all batches and regular maintenance
- 27. Light Resistance:  
Avg.  $\Delta E \leq 8.0$  is required Easily achieved with all batches and regular maintenance
- 28. Static Generation (AATCC 134): < 2000 Volts at 20% RH
- 29. Thermal Transmission (ASTM C518): R-value of 0.04
- 30. Cleaning: Cleaned and maintained effectively without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
- 31. Shine: Higher shine achieved by buffing without any artificial topical applied coatings.
- 32. Stain Removal: Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.
- 33. Substrate Preparation: As per the nora<sup>®</sup> nTx Installation Guide

K. Rubber Sheet Floor Covering (nora<sup>®</sup> nTx):

- 1. Product Name: **noraplan<sup>®</sup> valua nTx 3.0 mm, Articles 112B & 114B**
- 2. ASTM Specification: **Type I**  
ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing
- 3. Limited Wear Warranty: 5 years  
Limited Bond Warranty: 10 years
- 4. Material: nora<sup>®</sup> vulcanized rubber compound 913 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
- 5. Composition: Homogeneous rubber compound with marbled design
- 6. Color: 8 colors (Article 112B); 24 colors (Article 114B); minimum order quantities apply
- 7. Surface: Linear structured
- 8. Back of Sheet: nora<sup>®</sup> nTx pre-applied adhesive
- 9. Material Dimensions (ASTM F1859): 38.71 feet by 48 inches (11.8m by 1.22m),  $\geq$  amount specified
- 10. Thickness (ASTM F386): 0.12 inches (3.0mm)  
 $\pm 0.006$  inches ( $\pm 0.15$ mm) is required
- 11. Dimensional Stability (ASTM F2199): Meets requirements

- ≤ 0.15% in both directions is required
12. Flammability (E648/NFPA 253):  
≥ 0.45 watts/sq. cm for Class 1 is required NBSIR 75 950, 1.08
  13. Smoke Density (ASTM E662/NFPA 258):  
< 450 is required NBS, 360 (flaming) and 203 (non-flaming)
  14. Burn Resistance: Resistant to cigarette and solder burns
  15. Slip Resistance (ASTM D2047):  
≥ 0.5 is required Static coefficient of friction, Rubber dry 0.97, Rubber wet 0.85 (not recommended for ramps)
  16. Bacteria Resistance (ASTM E2180/ASTM G21): Resistant to bacteria, fungi, and micro-organism activity
  17. VOC's: This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
  18. Latex Allergies (ASTM D6499): Inhibition Elisa, results are below detection level
  19. Sound Absorption (ISO 140): Δ Lw 10dB (compare only Δ values)
  20. Hardness (ASTM D2240):  
≥ 85 is required Shore type "A", 92
  21. Static Load (ASTM F970):  
≤ 0.005 inches with 250 lbs. is required Residual compression of 0.003 inches with 800 lbs.
  22. Rolling Load Limit: ≤ 550 lbs. / sq. inch, with no forklift traffic
  23. Abrasion Resistance (ASTM D3389):  
≤ 0.035 oz. (1.0g) is required 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.006 oz. (0.17g) weight loss
  24. Elongation (ASTM D412):  
≥ 300 lbs. per sq. inch is required Modulus @ 10% is 1,299.0 lbs. per sq. inch
  25. Oil & Grease Resistance: No
  26. Heat Resistance (ASTM F1514):  
Avg. ΔE ≤ 8.0 is required Easily achieved with all batches and regular maintenance
  27. Light Resistance: Easily achieved with all batches and regular maintenance  
Avg. ΔE ≤ 8.0 is required
  28. Static Generation (AATCC 134): < 2000 Volts at 20% RH
  29. Thermal Transmission (ASTM C518): R-value of 0.04
  30. Cleaning: Cleaned and maintained effectively without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
  31. Shine: Higher shine achieved by buffing without any artificial topical applied coatings.
  32. Stain Removal: Samples of the product shall be provided for stain removal testing by the owner. Sample size shall be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples shall have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing shall consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period shall be no less than one week. Removal of chemicals shall be in accordance with manufacturers published cleaning and maintenance

33. Substrate Preparation: recommendations.  
As per the nora® nTx Installation Guide

## 2.8 RESILIENT TILE FLOORING FOR SPECIAL FIRE REQUIREMENTS

- A. Rubber Floor Tile (Egress):
1. Product Name: **norament® 920, Article 354**
  2. ASTM Specification: Type IA and Grade 1  
ASTM F1344 Standard Specification for Rubber Floor Tile
  3. Limited Wear Warranty: 10 years
  4. Material: nora® vulcanized rubber compound 920 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
  5. Composition: Homogeneous
  6. Color: 4 standard colors
  7. Surface: Round
  8. Back of Tile: Double-sanded smooth
  9. Material Size for Tile (ASTM F2055): 39.61 inches by 39.61 inches (1006mm by 1006mm)  
± 0.02 inch (± 0.5mm) is required
  10. Squareness (ASTM F2055): Meets requirements  
± 0.010 inches (± 0.254mm) is required
  11. Thickness (ASTM F386): 0.16 inches (4.0mm)  
+ 0.015/-0.005 inches (+ 0.381/- 0.127 mm) is required
  12. Dimensional Stability (ASTM F2199): Meets requirements  
≤ 0.15% in both directions is required
  13. Flammability (E648/NFPA 253): NBSIR 75 950, 0.94  
≥ 0.45 watts/sq. cm for Class 1 is required
  14. Smoke Density (ASTM E662/NFPA 258): NBS, 272 (flaming) and 167 (non-flaming)  
< 450 is required
  15. Tunnel Test (ASTM E84): 15 (flame) and 300 (smoke)
  16. CAN/ULC-S102.2: Surface Burning, FSC1 of 5 and SD of 30, achieved
  17. Burn Resistance: Resistant to cigarette and solder burns
  18. Slip Resistance (ASTM D2047): Static coefficient of friction, Neolite dry 0.85, Neolite wet 0.76  
≥ 0.5 is required (not recommended for ramps)
  19. Bacteria Resistance (ASTM E2180/ASTM G21): Resistant to bacteria, fungi, and micro-organism activity
  20. VOC's: This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant
  21. Latex Allergies (ASTM D6499): Inhibition Elisa, results are below detection level
  22. Sound Absorption (ISO 140): Δ Lw 13 dB (compare only Δ values)
  23. Hardness (ASTM D2240): Shore type "A", 91  
≥ 85 is required
  24. Static Load (ASTM F970): Residual compression of 0.005 inches with 800 lbs.  
≤ 0.005 inches with 250 lbs. is required
  25. Rolling Load Limit: ≤ 850 lbs. / sq. inch; for fork lift traffic nora® polyurethane



	adhesive is required
26. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.007 oz. (0.2g) weight loss
27. Oil & Grease Resistance:	Yes
28. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
29. Static Generation (AATCC 134):	< 2000 Volts at 20% RH
30. Cleaning:	Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
31. Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
32. Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m2, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.
33. Substrate Preparation:	Per ASTM F710 and the nora® Installation Guide

## 2.9 RESILIENT TILE FLOORING FOR EXTRA HEAVY TRAFFIC, ICE SKATE AND GOLF SPIKE RESISTANT

A. Rubber Floor Tile (Skate):	
1. Product Name:	<b>norament® 992, Article 1955</b>
2. ASTM Specification: ASTM F1344 Standard Specification for Rubber Floor Tile	Type IIA and Grade 2
3. Limited Wear Warranty:	5 years
4. Material:	nora® vulcanized rubber compound 992 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5. Composition:	Heterogeneous rubber compound
6. Color:	1 standard color
7. Surface:	Hammered
8. Back of Tile:	Double-sanded smooth
9. Material Size for Tile (ASTM F2055): ± 0.02 inch (± 0.5mm) is required	39.45 inches by 39.45 inches (1002mm by 1002mm)
10. Squareness (ASTM F2055): ± 0.010 inches (± 0.254mm) is required	Meets requirements

11. Thickness (ASTM F386): + 0.015/-0.005 inches (+ 0.381/- 0.127 mm) is required	0.36 inches (9.0mm)
12. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
13. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.56
14. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 289 (flaming) and 373 (non-flaming)
15. CAN/ULC-S102.2:	Surface Burning, FSC1 of 75 and SD of 1000
16. Burn Resistance:	Burn Resistance: Resistant to cigarette and solder burns
17. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.93 (not recommended for ramps)
18. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
19. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant
20. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
21. Sound Absorption (ISO 140):	Δ Lw 17dB (compare only Δ values)
22. Hardness (ASTM D2240): ≥ 70 is required	Shore type "A", 77
23. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.004 inches with 800 lbs.
24. Rolling Load Limit:	≤ 850 lbs. / sq. inch;
25. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.005 oz. (0.14g) weight loss
26. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 1076.9 lbs. per sq. inch
27. Oil & Grease Resistance:	Yes
28. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
29. Static Generation (AATCC 134):	< 2000 Volts at 20% RH
30. Cleaning:	Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
31. Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
32. Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m2, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but

not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.

33. Substrate Preparation:

Per ASTM F710 and the nora® Installation Guide

B. Rubber Floor Tile (Skate):

1. Product Name:
2. ASTM Specification:  
ASTM F1344 Standard Specification for Rubber Floor Tile
3. Limited Wear Warranty:
4. Material:
5. Composition:
6. Color:
7. Surface:
8. Back of Tile:
9. Material Size for Tile (ASTM F2055):  
± 0.02 inch (± 0.5mm) is required
10. Squareness (ASTM F2055):  
± 0.010 inches (± 0.254mm) is required
11. Thickness (ASTM F386):  
+ 0.015/-0.005 inches (+ 0.381/- 0.127 mm) is required
12. Dimensional Stability (ASTM F2199):  
≤ 0.15% in both directions is required
13. Flammability (E648/NFPA 253):  
≥ 0.45 watts/sq. cm for Class 1 is required
14. Smoke Density (ASTM E662/NFPA 258):  
< 450 is required
15. CAN/ULC-S102.2:
16. Burn Resistance:
17. Slip Resistance (ASTM D2047):  
≥ 0.5 is required
18. Bacteria Resistance (ASTM E2180/ASTM G21):
19. VOC's:
20. Latex Allergies (ASTM D6499):
21. Sound Absorption (ISO 140):
22. Hardness (ASTM D2240):  
≥ 70 is required
23. Static Load (ASTM F970):  
≤ 0.005 inches with 250 lbs. is required

**norament® 992 grano, Article 1955**

Type IIB and Grade 2

5 years

nora® vulcanized rubber compound 992 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury

Heterogeneous rubber compound

6 standard colors

Hammered

Double-sanded smooth

39.45 inches by 39.45 inches (1002mm by 1002mm)

Meets requirements

0.36 inches (9.0mm)

Meets requirements

NBSIR 75 950, 0.56

NBS, 289 (flaming) and 373 (non-flaming)

Surface Burning, FSC1 of 75 and SD of 1000

Burn Resistance: Resistant to cigarette and solder burns

Static coefficient of friction, Neolite dry 0.93, Neolite wet 0.93 (not recommended for ramps)

Resistant to bacteria, fungi, and micro-organism activity

This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant

Inhibition Elisa, results are below detection level

Δ Lw 17dB (compare only Δ values)

Shore type "A", 77

Residual compression of 0.004 inches with 800 lbs.

24. Rolling Load Limit:	≤ 850 lbs. / sq. inch
25. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.005 oz. (0.14g) weight loss
26. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 1076.9 lbs. per sq. inch
27. Oil & Grease Resistance:	Yes
28. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
29. Static Generation (AATCC 134):	< 2000 Volts at 20% RH
30. Cleaning:	Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
31. Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
32. Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m2, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.
33. Substrate Preparation:	Per ASTM F710 and the nora® Installation Guide

## 2.10 RESILIENT TILE FLOORING FOR PRE-INSTALLED RAISED ACCESS FLOORING, OR RELEASABLE

A. Rubber Floor Tile (RAF):	
1. Product Name:	<b>norament® grano, Article 1912</b>
2. ASTM Specification: ASTM F1344 Standard Specification for Rubber Floor Tile	Type IB and Grade 2
3. Limited Wear Warranty:	10 years
4. Material:	nora® vulcanized rubber compound 926 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5. Composition:	Homogeneous rubber compound with a random scattered design
6. Color:	5 standard colors
7. Surface:	Hammered
8. Back of Tile:	Double-sanded smooth
9. Material Size for Tile (ASTM F2055): ≥ 24 inches by 24 inches (609mm by	24.6 inches by 24.6 inches (625mm by 625mm), untrimmed

	609mm) is required	
10.	Thickness (ASTM F386): + 0.015/-0.005 inches (+ 0.381/- 0.127 mm) is required	0.14 inches (3.5mm)
11.	Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
12.	Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.92
13.	Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 267 (flaming) and 130 (non-flaming)
14.	CAN/ULC-S102.2:	Surface Burning, FSC1 of 70 and SD of 470
15.	Burn Resistance:	Resistant to cigarette and solder burns
16.	Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.99, Neolite wet 0.95 (not recommended for ramps)
17.	Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
18.	VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant
19.	Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20.	Sound Absorption (ASTM E2179/ISO 140):	Δ IIC 11, Δ Lw 11 dB (compare only Δ values)
21.	Sound Generation:	66.3 dBA, 68.5 dBC and 19.6 Sones, Independently tested
22.	Hardness (ASTM D2240): ≥ 70 is required	Shore type "A", 82
23.	Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.005 inches with 800 lbs.
24.	Rolling Load Limit:	≤ 850 lbs. / sq. inch; for fork lift traffic nora <sup>®</sup> polyurethane adhesive is required
25.	Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.002 oz. (0.05g) weight loss
26.	Oil & Grease Resistance:	Yes
27.	Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance.
28.	Static Generation (AATCC 134):	< 2000 Volts at 20% RH, achieved
29.	Thermal Transmission (ASTM C518):	R-value of -0.90
30.	Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
31.	Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
32.	Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m2, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the

product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.

33. Substrate Preparation:

Per ASTM F710 and the nora® Installation Guide

2.11 RESILIENT TILE FLOORING FOR ELECTROSTATIC DISSIPATIVE PROTECTION

A. Rubber Floor Tile (ESD):

- |  |   |
|--|---|
| 1. Product Name:   | <b>norament® grano ed, Article 1880</b>   |
| 2. ASTM Specification:<br>ASTM F1344 Standard Specification for Rubber Floor Tile    | Type IB and Grade 2   |
| 3. Limited Wear Warranty:  | 10 years  |
| 4. Material:   | nora® vulcanized rubber compound 928 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:  | Homogeneous rubber compound with a random scattered design  |
| 6. Color:  | 8 standard colors   |
| 7. Surface:  | Hammered  |
| 8. Back of Tile:   | Double-sanded smooth  |
| 9. Material Size for Tile (ASTM F2055):<br>± 0.02 (± 0.5mm) is required              | 39.53 inches by 39.53 inches (1004mm by 1004mm)   |
| 10. Squareness (ASTM F2055):<br>± 0.010 inches (± 0.254mm) is required               | Meets requirements  |
| 11. Thickness (ASTM F386):<br>+ 0.015/-0.005 inches (+ 0.381/- 0.127 mm) is required | 0.16 inches (4mm)   |
| 12. Dimensional Stability (ASTM F2199):<br>≤ 0.15% in both directions is required    | Meets requirements  |
| 13. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required     | NBSIR 75 950, 0.58  |
| 14. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required                         | NBS, 418 (flaming) and 285 (non-flaming)  |
| 15. Burn Resistance:   | Resistant to cigarette and solder burns   |
| 16. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                               | Static coefficient of friction, Neolite dry 1.0, Neolite wet 0.90 (not recommended for ramps)   |
| 17. Bacteria Resistance (ASTM E2180/ASTM G21):                                       | Resistant to bacteria, fungi, and micro-organism activity   |
| 18. VOC's:   | This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant   |
| 19. Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level   |
| 20. Sound Absorption (ISO 140):  | Δ Lw 15dB (compare only Δ values)   |
| 21. Hardness (ASTM D2240):   | Shore type "A", 84  |

≥ 70 is required

- |  |  |
|--|--|
| 22. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.004 inches with 800 lbs.   |
| 23. Rolling Load Limit:  | ≤ 850 lbs. / sq. inch  |
| 24. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.004 oz. (0.11g) weight loss   |
| 25. Oil & Grease Resistance:   | Yes  |
| 26. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance   |
| 27. Static Generation (ANSI ESD S97.2):                                  | < 20 Volts   |
| 28. Decay Time (FTM 101 C 4046):   | < 0.25 (sec)   |
| 29. Conductivity (ASTM F150):  | $10^6 < 10^9$ (ohms)   |
| 30. Cleaning:  | Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.  |
| 31. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.  |
| 32. Stain Removal:   | Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m <sup>2</sup> , pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 33. Substrate Preparation:   | Per ASTM F710 and the nora <sup>®</sup> Installation Guide   |

**B. Rubber Floor Tile (ESD):**

- |   |   |
|---|---|
| 1. Product Name:  | <b>norament<sup>®</sup> grano ed, Article 1912</b>  |
| 2. ASTM Specification:<br>ASTM F1344 Standard Specification for Rubber Floor Tile | Type IB and Grade 2   |
| 3. Limited Wear Warranty:   | 10 years  |
| 4. Material:  | nora <sup>®</sup> vulcanized rubber compound 928 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous rubber compound with a random scattered design  |
| 6. Color:   | 5 standard colors   |
| 7. Surface:   | Hammered  |
| 8. Back of Tile:  | Double-sanded smooth  |

9. Material Size for Tile (ASTM F2055): ≥ 24 inches by 24 inches (609mm by 609mm) is required	24.6 inches by 24.6 inches (625mm by 625mm), untrimmed
10. Thickness (ASTM F386): + 0.015/-0.005 inches (+ 0.381/- 0.127 mm) is required	0.14 inches (3.5mm)
11. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
12. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.58
13. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 418 (flaming) and 285 (non-flaming)
14. Burn Resistance:	Resistant to cigarette and solder burns
15. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 1.0, Neolite wet 0.90 (not recommended for ramps)
16. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
17. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant.
18. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
19. Sound Absorption (ISO 140):	Δ Lw 15dB (compare only Δ values)
20. Hardness (ASTM D2240): ≥ 70 is required	Shore type "A", 84
21. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.004 inches with 800 lbs.
22. Rolling Load Limit:	≤ 850 lbs. / sq. inch
23. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.004 oz. (0.11g) weight loss
24. Oil & Grease Resistance:	Yes
25. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
26. Static Generation (ANSI ESD S97.2):	< 20 Volts
27. Decay Time (FTM 101 C 4046):	< 0.25 (sec)
28. Conductivity (ASTM F150):	10 <sup>6</sup> < 10 <sup>9</sup> (ohms)
29. Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
30. Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
31. Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size should be ~ 1 m <sup>2</sup> , pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the



product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.

32. Substrate Preparation:

Per ASTM F710 and the nora<sup>®</sup> Installation Guide

C. Rubber Floor Tile (ESD):

1. Product Name:
2. ASTM Specification:  
ASTM F1344 Standard Specification for Rubber Floor Tile
3. Limited Wear Warranty:
4. Material:
5. Composition:
6. Color:
7. Surface:
8. Back of Tile:
9. Material Size for Tile (ASTM F2055):  
± 0.018 (± 0.45mm) is required
10. Squareness (ASTM F2055):  
± 0.018 inches (± 0.45mm) is required
11. Thickness (ASTM F386):  
± 0.005 inches (± 0.127mm) is required
12. Dimensional Stability (ASTM F2199):  
≤ 0.15% in both directions is required
13. Flammability (E648/NFPA 253):  
≥ 0.45 watts/sq. cm for Class 1 is required
14. Smoke Density (ASTM E662/NFPA 258):  
< 450 is required
15. CAN/ULC-S102.2:
16. Burn Resistance:
17. Slip Resistance (ASTM D2047):  
≥ 0.5 is required
18. Bacteria Resistance (ASTM E2180/ASTM G21):
19. VOC's:
20. Latex Allergies (ASTM D6499):
21. Sound Absorption (ISO 140):
22. Hardness (ASTM D2240):  
≥ 85 is required

**noraplan environcare™ ed, Article 2390**

Type I and Grade 1

5 years

nora<sup>®</sup> vulcanized rubber compound 948 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury

Homogeneous rubber compound with a random scattered design

14 standard colors

Smooth

Double-sanded smooth

24.015 inches by 24.015 inches (610mm by 610mm)

Meets requirements

0.08 inches (2.0mm)

Meets requirements

NBSIR 75 950, 1.00

NBS, 81 (flaming) and 122 (non-flaming)

Surface Burning, FSC1 of 185 and SD of 1600

Resistant to cigarette and solder burns

Static coefficient of friction, Neolite dry 0.92, Neolite wet 0.89 (not recommended for ramps)

Resistant to bacteria, fungi, and micro-organism activity

This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant

Inhibition Elisa, results are below detection level

Δ Lw 6dB (compare only Δ values)

Shore type "A", 92

- |  |   |
|--|---|
| 23. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.003 inches with 800 lbs.  |
| 24. Rolling Load Limit:  | ≤ 450 lbs. / sq. inch, with no forklift traffic   |
| 25. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.002 oz. (0.07g) weight loss  |
| 26. Elongation (ASTM D412):<br>≥ 300 lbs. per sq. inch is required       | Modulus @ 10% is 1,196.7 lbs. per sq. inch  |
| 27. Oil & Grease Resistance:   | Yes   |
| 28. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance  |
| 29. Light Resistance:<br>Avg. ΔE ≤ 8.0 is required                       | Easily achieved with all batches and regular maintenance  |
| 30. Static Generation (ANSI ESD S97.2):                                  | < 20 Volts  |
| 31. Decay Time (FTM 101 C 4046):   | < 0.25 (sec)  |
| 32. Conductivity (ASTM F150):  | $10^6 < 10^9$ (ohms)  |
| 33. Thermal Transmission (ASTM C518):                                    | R-value 0.01  |
| 34. Cleaning:  | Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 35. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.   |
| 36. Stain Removal:   | Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 37. Substrate Preparation:   | Per ASTM F710 and the nora® Installation Guide  |

D. Rubber Floor Tile (ESD):

- |   |   |
|---|---|
| 1. Product Name:  | <b>noraplan® sentica ed, Article 2702</b>   |
| 2. ASTM Specification:<br>ASTM F1344 Standard Specification for Rubber Floor Tile | Type I and Grade 1  |
| 3. Limited Wear Warranty:   | 5 years   |
| 4. Material:  | nora® vulcanized rubber compound 948 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |

5. Composition:	Homogeneous rubber compound with a random scattered design
6. Color:	12 standard colors
7. Surface:	Smooth
8. Back of Tile:	Double-sanded smooth
9. Material Dimensions (ASTM F2055): ± 0.018 (± 0.45mm) is required	24.015 inches by 24.015 inches (610mm by 610mm)
10. Squareness (ASTM F2055): ± 0.018 inches (± 0.45mm) is required	Meets requirements
11. Thickness (ASTM F386): ± 0.005 inches (± 0.127mm) is required	0.08 inches (2.0mm)
12. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
13. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 1.00
14. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 81 (flaming) and 122 (non-flaming)
15. CAN/ULC-S102.2:	Surface Burning, FSC1 of 185 and SD of 1600
16. Burn Resistance:	Resistant to cigarette and solder burns
17. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.92, Neolite wet 0.89 (not recommended for ramps)
18. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
19. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant
20. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
21. Sound Absorption (ISO 140):	Δ Lw 6dB (compare only Δ values)
22. Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
23. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
24. Rolling Load Limit:	≤ 450 lbs. / sq. inch, with no forklift traffic
25. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.002 oz. (0.07g) weight loss
26. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 1,196.7 lbs. per sq. inch
27. Oil & Grease Resistance:	Yes
28. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
29. Light Resistance: Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
30. Static Generation (ANSI ESD S97.2):	< 20 Volts
31. Decay Time (FTM 101 C 4046):	< 0.25 (sec)
32. Conductivity (ASTM F150):	10 <sup>6</sup> < 10 <sup>9</sup> (ohms)
33. Thermal Transmission (ASTM C518):	R-value 0.01

- |                            |   |
|----------------------------|---|
| 34. Cleaning:              | Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 35. Shine:                 | Higher shine achieved by buffing without any artificial topical applied coatings.   |
| 36. Stain Removal:         | Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 37. Substrate Preparation: | Per ASTM F710 and the nora® Installation Guide  |

2.12 RESILIENT SHEET FLOORING FOR ELECTROSTATIC DISSIPATIVE PROTECTION

A. Rubber Sheet Flooring:

- |   |   |
|---|---|
| 1. Product Name:  | <b>noraplan environcare™ ed, Article 1390</b>   |
| 2. ASTM Specification:<br>ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing | Type I  |
| 3. Limited Wear Warranty:   | 5 years   |
| 4. Material:  | nora® vulcanized rubber compound 948 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:   | Homogeneous rubber compound with a random scattered design  |
| 6. Color:   | 14 standard colors  |
| 7. Surface:   | Smooth  |
| 8. Back of Sheet:   | Double-sanded smooth  |
| 9. Material Dimensions (ASTM F1859):  | 49.21 feet by 48 inches (15m by 1.22m), ≥ amount specified  |
| 10. Thickness (ASTM F386):<br>± 0.006 inches (± 0.15mm) is required   | 0.08 inches (2.0mm)   |
| 11. Dimensional Stability (ASTM F2199):<br>≤ 0.15% in both directions is required                           | Meets requirements  |
| 12. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required                            | NBSIR 75 950, 1.00  |
| 13. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required  | NBS, 81 (flaming) and 122 (non-flaming)   |

14. CAN/ULC-S102.2:	Surface Burning, FSC1 of 185 and SD of 1600
15. Burn Resistance:	Resistant to cigarette and solder burns
16. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.92, Neolite wet 0.89 (not recommended for ramps)
17. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
18. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant
19. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20. Sound Absorption (ISO 140):	Δ Lw 6dB (compare only Δ values)
21. Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92 achieved
22. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
23. Rolling Load Limit:	≤ 450 lbs. / sq. inch, with no forklift traffic
24. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.002 oz. (0.07g) weight
25. Elongation (ASTM D412): ≥ 300 lbs. per sq. inch is required	Modulus @ 10% is 1,196.7 lbs. per sq. inch
26. Oil & Grease Resistance:	Yes
27. Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
28. Light Resistance: Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
29. Static Generation (ANSI ESD S97.2):	< 20 Volts
30. Decay Time (FTM 101 C 4046):	< 0.25 (sec)
31. Conductivity (ASTM F150):	10 <sup>6</sup> < 10 <sup>9</sup> (ohms)
32. Thermal Transmission (ASTM C518):	R-value 0.01
33. Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
34. Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
35. Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with

	manufacturers published cleaning and maintenance recommendations.
36. Substrate Preparation:	Per ASTM F710 and the nora® Installation Guide
<b>B. Rubber Sheet Flooring (ESD):</b>	
1. Product Name:	<b>noraplan® sentica ed, Article 1702</b>
2. ASTM Specification: ASTM F1859 Standard Specification for Rubber Sheet Floor Covering Without Backing	Type I
3. Limited Wear Warranty:	5 years
4. Material:	nora® vulcanized rubber compound 948 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5. Composition:	Homogeneous rubber compound with a random scattered design
6. Color:	12 standard colors
7. Surface:	Smooth
8. Back of Sheet:	Double-sanded smooth
9. Material Dimensions for Sheet (ASTM F1859):	49.21 feet by 48 inches (15m by 1.22m), ≥ amount specified
10. Thickness (ASTM F386): ± 0.006 inches (± 0.15mm) is required	0.08 inches (2.0mm)
11. Dimensional Stability (ASTM F2199): ≤ 0.15% in both directions is required	Meets requirements
12. Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 1.00
13. Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 81 (flaming) and 122 (non-flaming)
14. CAN/ULC-S102.2:	Surface Burning, FSC1 of 185 and SD of 1600
15. Burn Resistance:	Resistant to cigarette and solder burns
16. Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.92, Neolite wet 0.89 (not recommended for ramps)
17. Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
18. VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant
19. Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
20. Sound Absorption (ISO 140):	Δ Lw 6dB (compare only Δ values)
21. Hardness (ASTM D2240): ≥ 85 is required	Shore type "A", 92
22. Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.003 inches with 800 lbs.
23. Rolling Load Limit:	≤ 450 lbs. / sq. inch, with no forklift traffic
24. Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.002 oz. (0.07g) weight loss
25. Elongation (ASTM D412):	Modulus @ 10% is 1,196.7 lbs. per sq. inch

- ≥ 300 lbs. per sq. inch is required
- |  |   |
|--|---|
| 26. Oil & Grease Resistance:                                   | Yes   |
| 27. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required | Easily achieved with all batches and regular maintenance  |
| 28. Light Resistance:<br>Avg. ΔE ≤ 8.0 is required             | Easily achieved with all batches and regular maintenance  |
| 29. Static Generation (ANSI ESD S97.2):                        | < 20 Volts  |
| 30. Decay Time (FTM 101 C 4046):                               | < 0.25 (sec)  |
| 31. Conductivity (ASTM F150):                                  | 10 <sup>6</sup> < 10 <sup>9</sup> (ohms)  |
| 32. Thermal Transmission (ASTM C518):                          | R-value 0.01  |
| 33. Cleaning:  | Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 34. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.   |
| 35. Stain Removal:   | Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 36. Substrate Preparation:                                     | Per ASTM F710 and the nora <sup>®</sup> Installation Guide  |

## 2.13 RESILIENT STAIRTREADS (ONE-PIECE NOSING TREAD AND RISER)

### A. Rubber Stair Treads:

- |  |   |
|--|---|
| 1. Product Name:   | <b>norament<sup>®</sup> grano stairtreads, Articles 479 (4 foot), 468 (5 foot) and 469 (6 foot) (visually impaired strips available)</b>                          |
| 2. ASTM Specification:<br>ASTM F2169 Standard Specification for Resilient Stair Treads | Type TS, Class 2, can be Group 1 and/or 2 and Grade 2   |
| 3. Limited Wear Warranty:  | 10 years  |
| 4. Material:   | nora <sup>®</sup> vulcanized rubber compound 926 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury |
| 5. Composition:  | Homogeneous rubber compound with a random scattered design  |
| 6. Color:  | 12 standard colors  |
| 7. Surface:  | Hammered and smooth   |

8.	Back of Stair Tread:	Double-sanded smooth
9.	Material Dimensions (ASTM F2169):	
	Length	50.59 inches (1285mm), 63.54 inches (1614mm) and 78.89 inches (2004mm)
	Depth	19.88 inches (505mm)
	Height	1.77 inches (45mm)
	Thickness	0.20 inches (5.0mm)
10.	Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 1.0
11.	Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 334 (flaming) and 168 (non-flaming)
12.	CAN/ULC-S102.2:	Surface Burning, FSC1 of 70 and SD of 470
13.	Burn Resistance:	Resistant to cigarette and solder burns
14.	Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.99, Neolite wet 0.95
15.	Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
16.	VOC's:	This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant
17.	Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
18.	Hardness (ASTM D2240): ≥ 70 is required	Shore type "A", 82
19.	Static Load (ASTM F970): ≤ 0.005 inches with 250 lbs. is required	Residual compression of 0.005 inches with 800 lbs.
20.	Abrasion Resistance (ASTM D3389): ≤ 0.035 oz. (1.0g) is required	1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.002 oz. (0.05g) weight loss
21.	Oil & Grease Resistance:	Yes
22.	Heat Resistance (ASTM F1514): Avg. ΔE ≤ 8.0 is required	Easily achieved with all batches and regular maintenance
23.	Static Generation (AATCC 134):	< 2000 Volts at 20% RH
24.	Cleaning:	Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
25.	Shine:	Higher shine achieved by buffing without any artificial topical applied coatings.
26.	Stain Removal:	Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer.



Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.

27. Substrate Preparation:

Per ASTM F710 and the nora® Installation Guide

B. Rubber Stair Treads:

- |  |   |        |  |       |                      |        |                    |           |                     |
|--|---|--------|--|-------|----------------------|--------|--------------------|-----------|---------------------|
| 1. Product Name:   | <b>norament® hammered stairtreads, Articles 479 (4 foot), 468 (5 foot) and 469 (6 foot) (visually impaired strips available)</b>  |        |  |       |                      |        |                    |           |                     |
| 2. ASTM Specification:<br>ASTM F2169 Standard Specification for Resilient Stair Treads | Type TS, Class 2, can be Group 1 and/or 2 and Grade 1   |        |  |       |                      |        |                    |           |                     |
| 3. Limited Wear Warranty:  | 10 years  |        |  |       |                      |        |                    |           |                     |
| 4. Material:   | nora® vulcanized rubber compound 926 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury   |        |  |       |                      |        |                    |           |                     |
| 5. Composition:  | Homogeneous   |        |  |       |                      |        |                    |           |                     |
| 6. Color:  | 5 standard colors   |        |  |       |                      |        |                    |           |                     |
| 7. Surface:  | Hammered and smooth   |        |  |       |                      |        |                    |           |                     |
| 8. Back of Stair Tread:  | Double-sanded smooth  |        |  |       |                      |        |                    |           |                     |
| 9. Material Dimensions (ASTM F2169):   | <table border="0" style="margin-left: 20px;"> <tr> <td style="padding-right: 10px;">Length</td> <td>50.59 inches (1285mm), 63.54 inches (1614mm) and 78.89 inches (2004mm)</td> </tr> <tr> <td style="padding-right: 10px;">Depth</td> <td>19.88 inches (505mm)</td> </tr> <tr> <td style="padding-right: 10px;">Height</td> <td>1.77 inches (45mm)</td> </tr> <tr> <td style="padding-right: 10px;">Thickness</td> <td>0.20 inches (5.0mm)</td> </tr> </table> | Length | 50.59 inches (1285mm), 63.54 inches (1614mm) and 78.89 inches (2004mm) | Depth | 19.88 inches (505mm) | Height | 1.77 inches (45mm) | Thickness | 0.20 inches (5.0mm) |
| Length   | 50.59 inches (1285mm), 63.54 inches (1614mm) and 78.89 inches (2004mm)  |        |  |       |                      |        |                    |           |                     |
| Depth  | 19.88 inches (505mm)  |        |  |       |                      |        |                    |           |                     |
| Height   | 1.77 inches (45mm)  |        |  |       |                      |        |                    |           |                     |
| Thickness  | 0.20 inches (5.0mm)   |        |  |       |                      |        |                    |           |                     |
| 10. Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required       | NBSIR 75 950, 1.1   |        |  |       |                      |        |                    |           |                     |
| 11. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required                           | NBS, 380 (flaming) and 230 (non-flaming)  |        |  |       |                      |        |                    |           |                     |
| 12. Burn Resistance:   | Resistant to cigarette and solder burns   |        |  |       |                      |        |                    |           |                     |
| 13. Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                                 | Static coefficient of friction, Neolite dry 0.99, Neolite wet 0.95  |        |  |       |                      |        |                    |           |                     |
| 14. Bacteria Resistance (ASTM E2180/ASTM G21):   | Resistant to bacteria, fungi, and micro-organism activity   |        |  |       |                      |        |                    |           |                     |
| 15. VOC's:   | This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant   |        |  |       |                      |        |                    |           |                     |
| 16. Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level   |        |  |       |                      |        |                    |           |                     |
| 17. Hardness (ASTM D2240):<br>≥ 70 is required   | Shore type "A", 82 achieved   |        |  |       |                      |        |                    |           |                     |
| 18. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required               | Residual compression of 0.005 inches with 800 lbs.  |        |  |       |                      |        |                    |           |                     |
| 19. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required                | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.006 oz. (0.16g) weight loss  |        |  |       |                      |        |                    |           |                     |
| 20. Oil & Grease Resistance:   | No  |        |  |       |                      |        |                    |           |                     |
| 21. Heat Resistance (ASTM F1514):  | Easily achieved with all batches and regular maintenance  |        |  |       |                      |        |                    |           |                     |

Avg.  $\Delta E \leq 8.0$  is required

- 22. Static Generation (AATCC 134): < 2000 Volts at 20% RH
- 23. Cleaning: Cleaned and maintained effectively using water, nora<sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
- 24. Shine: Higher shine achieved by buffing without any artificial topical applied coatings.
- 25. Stain Removal: Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.
- 26. Substrate Preparation: Per ASTM F710 and the nora<sup>®</sup> Installation Guide

C. Rubber Stair Treads:

- 1. Product Name: **norament<sup>®</sup> round stairtreads, Articles 465 (4 foot), 466 (5 foot) and 467 (6 foot) (visually impaired strips available)**
- 2. ASTM Specification: Type TS, Class 2, can be Group 1 and/or 2 and Grade 1  
ASTM F2169 Standard Specification for Resilient Stair Treads
- 3. Limited Wear Warranty: 10 years
- 4. Material: nora<sup>®</sup> vulcanized rubber compound 926 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
- 5. Composition: Homogeneous
- 6. Color: 16 standard colors
- 7. Surface: Round and smooth
- 8. Back of Stair Tread: Double-sanded smooth
- 9. Material Dimensions (ASTM F2169):
  - Length 50.59 inches (1285mm), 63.54 inches (1614mm) and 78.89 inches (2004mm)
  - Depth 19.88 inches (505mm)
  - Height 1.77 inches (45mm)
  - Thickness 0.18 inches (4.5mm)
- 10. Flammability (E648/NFPA 253): NBSIR 75 950, 1.1  
≥ 0.45 watts/sq. cm for Class 1 is required
- 11. Smoke Density (ASTM E662/NFPA 258): NBS, 380 (flaming) and 230 (non-flaming)

- < 450 is required
12. Burn Resistance: Resistant to cigarette and solder burns
  13. Slip Resistance (ASTM D2047): Static coefficient of friction, Neolite dry 0.85, Neolite wet 0.76  
 ≥ 0.5 is required
  14. Bacteria Resistance (ASTM E2180/ASTM G21): Resistant to bacteria, fungi, and micro-organism activity
  15. VOC's: This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant
  16. Latex Allergies (ASTM D6499): Inhibition Elisa, results are below detection level
  17. Hardness (ASTM D2240): Shore type "A", 82  
 ≥ 70 is required is required
  18. Static Load (ASTM F970): Residual compression of 0.005 inches with 800 lbs.  
 ≤ 0.005 inches with 250 lbs. is required
  19. Abrasion Resistance (ASTM D3389): Abrasion Resistance: ASTM D3389, 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.005 oz. (0.14g) weight loss achieved, ≤ 0.035 oz. (1.0g) is required
  20. Oil & Grease Resistance: No
  21. Heat Resistance (ASTM F1514): Easily achieved with all batches and regular maintenance  
 Avg. ΔE ≤ 8.0 is required
  22. Static Generation (AATCC 134): < 2000 Volts at 20% RH
  23. Cleaning: Cleaned and maintained effectively using water, nora® pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.
  24. Shine: Higher shine achieved by buffing without any artificial topical applied coatings.
  25. Stain Removal: Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.
  26. Substrate Preparation: Per ASTM F710 and the nora® Installation Guide

D. Rubber Stair Treads:

1. Product Name: **norament® satura stairtreads, Articles 479 (4 foot), 468 (5 foot) and 469 (6 foot) (visually impaired strips available)**
2. ASTM Specification: Type TS, Class 2, can be Group 1 and/or 2 and Grade 2  
 ASTM F2169 Standard Specification for Resilient Stair Treads

- |           |  |   |        |  |       |                      |        |                    |           |                     |
|-----------|--|---|--------|--|-------|----------------------|--------|--------------------|-----------|---------------------|
| 3.        | Limited Wear Warranty:   | 10 years  |        |  |       |                      |        |                    |           |                     |
| 4.        | Material:  | nora <sup>®</sup> vulcanized rubber compound 926 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury   |        |  |       |                      |        |                    |           |                     |
| 5.        | Composition:   | Homogeneous rubber compound with a random scattered design  |        |  |       |                      |        |                    |           |                     |
| 6.        | Color:   | 12 standard colors  |        |  |       |                      |        |                    |           |                     |
| 7.        | Surface:   | Hammered and smooth   |        |  |       |                      |        |                    |           |                     |
| 8.        | Back of Stair Tread:   | Double-sanded smooth  |        |  |       |                      |        |                    |           |                     |
| 9.        | Material Dimensions ASTM F2169):   | <table border="0" style="margin-left: 20px;"> <tr> <td style="padding-right: 10px;">Length</td> <td>50.59 inches (1285mm), 63.54 inches (1614mm) and 78.89 inches (2004mm)</td> </tr> <tr> <td style="padding-right: 10px;">Depth</td> <td>19.88 inches (505mm)</td> </tr> <tr> <td style="padding-right: 10px;">Height</td> <td>1.77 inches (45mm)</td> </tr> <tr> <td style="padding-right: 10px;">Thickness</td> <td>0.20 inches (5.0mm)</td> </tr> </table> | Length | 50.59 inches (1285mm), 63.54 inches (1614mm) and 78.89 inches (2004mm) | Depth | 19.88 inches (505mm) | Height | 1.77 inches (45mm) | Thickness | 0.20 inches (5.0mm) |
| Length    | 50.59 inches (1285mm), 63.54 inches (1614mm) and 78.89 inches (2004mm)       |   |        |  |       |                      |        |                    |           |                     |
| Depth     | 19.88 inches (505mm)   |   |        |  |       |                      |        |                    |           |                     |
| Height    | 1.77 inches (45mm)   |   |        |  |       |                      |        |                    |           |                     |
| Thickness | 0.20 inches (5.0mm)  |   |        |  |       |                      |        |                    |           |                     |
| 10.       | Flammability (E648/NFPA 253):<br>≥ 0.45 watts/sq. cm for Class 1 is required | NBSIR 75 950, 1.0   |        |  |       |                      |        |                    |           |                     |
| 11.       | Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required                     | NBS, 334 (flaming) and 168 (non-flaming)  |        |  |       |                      |        |                    |           |                     |
| 12.       | CAN/ULC-S102.2:  | Surface Burning, FSC1 of 70 and SD of 470   |        |  |       |                      |        |                    |           |                     |
| 13.       | Burn Resistance:   | Resistant to cigarette and solder burns   |        |  |       |                      |        |                    |           |                     |
| 14.       | Slip Resistance (ASTM D2047):<br>≥ 0.5 is required                           | Static coefficient of friction, Neolite dry 0.99, Neolite wet 0.95  |        |  |       |                      |        |                    |           |                     |
| 15.       | Bacteria Resistance (ASTM E2180/ASTM G21):                                   | Resistant to bacteria, fungi, and micro-organism activity   |        |  |       |                      |        |                    |           |                     |
| 16.       | VOC's:   | This flooring is GREENGUARD Gold Certified for Low VOC Emissions, Blue Angel Certified and CA 01350 compliant   |        |  |       |                      |        |                    |           |                     |
| 17.       | Latex Allergies (ASTM D6499):  | Inhibition Elisa, results are below detection level   |        |  |       |                      |        |                    |           |                     |
| 18.       | Hardness (ASTM D2240):<br>≥ 70 is required                                   | Shore type "A", 82 achieved,  |        |  |       |                      |        |                    |           |                     |
| 19.       | Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required         | Residual compression of 0.005 inches with 800 lbs.  |        |  |       |                      |        |                    |           |                     |
| 20.       | Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required          | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.002 oz. (0.05g) weight loss  |        |  |       |                      |        |                    |           |                     |
| 21.       | Oil & Grease Resistance:   | Yes   |        |  |       |                      |        |                    |           |                     |
| 22.       | Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required                   | Easily achieved with all batches and regular maintenance  |        |  |       |                      |        |                    |           |                     |
| 23.       | Static Generation (AATCC 134):   | < 2000 Volts at 20% RH  |        |  |       |                      |        |                    |           |                     |
| 24.       | Cleaning:  | Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |        |  |       |                      |        |                    |           |                     |
| 25.       | Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.   |        |  |       |                      |        |                    |           |                     |

26. Stain Removal: Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations.

27. Substrate Preparation: Per ASTM F710 and the nora® Installation Guide

E. Rubber Stair Treads (Egress):

1. Product Name: **norament® 920 stairtreads, Article 465 (visually impaired strips available)**
2. ASTM Specification: **ASTM F2169 Standard Specification for Resilient Stair Treads** Type TS, Class 2, can be Group 1 and/or 2 and Grade 1
3. Limited Wear Warranty: 10 years
4. Material: nora® vulcanized rubber compound 920 with environmentally compatible color pigments that are free of toxic heavy metals like lead, cadmium or mercury
5. Composition: Homogeneous
6. Color: 4 standard colors
7. Surface: Round and smooth
8. Back of Stair Tread: Double-sanded smooth
9. Material Dimensions (ASTM F2169):
 

Length	50.59 inches (1285mm)
Depth	19.68 inches (500mm)
Height	1.77 inches (45mm)
Thickness	0.18 inches (4.5mm)
10. Flammability (E648/NFPA 253): **NBSIR 75 950, 0.94**  
 ≥ 0.45 watts/sq. cm for Class 1 is required
11. Smoke Density (ASTM E662/NFPA 258): **NBS, 272 (flaming) and 167 (non-flaming)**  
 < 450 is required
12. Tunnel Test (ASTM E84): **Class A, Flame 15 – Smoke 300**
13. CAN/ULC-S102.2: **Surface Burning, FSC1 of 5 and SD of 30**
14. Burn Resistance: **Resistant to cigarette and solder burns**
15. Slip Resistance (ASTM D2047): **Static coefficient of friction, Neolite dry 0.85, Neolite wet 0.76**  
 ≥ 0.5 is required
16. Bacteria Resistance (ASTM E2180/ASTM G21): **Resistant to bacteria, fungi, and micro-organism activity**
17. VOC's: **This flooring is GREENGUARD Gold Certified for Low VOC Emissions and CA 01350 compliant**
18. Latex Allergies (ASTM D6499): **Inhibition Elisa, results are below detection level**

- |  |   |
|--|---|
| 19. Hardness (ASTM D2240):<br>≥ 70 is required                           | Shore type "A", 91  |
| 20. Static Load (ASTM F970):<br>≤ 0.005 inches with 250 lbs. is required | Residual compression of 0.005 inches with 800 lbs.  |
| 21. Abrasion Resistance (ASTM D3389):<br>≤ 0.035 oz. (1.0g) is required  | 1.1 lbs. (500g) load on H-18 wheel with 1000 cycles, 0.007 oz. (0.2g) weight loss   |
| 22. Oil & Grease Resistance:   | No  |
| 23. Heat Resistance (ASTM F1514):<br>Avg. ΔE ≤ 8.0 is required           | Easily achieved with all batches and regular maintenance  |
| 24. Static Generation (AATCC 134/ANSI ESD S97.2):                        | < 2000 Volts at 20% RH  |
| 25. Cleaning:  | Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 26. Shine:   | Higher shine achieved by buffing without any artificial topical applied coatings.   |
| 27. Stain Removal:   | Samples of the product must be provided for stain removal testing by the owner. Sample size must be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples must have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing must consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period must be no less than one week. Removal of chemicals must be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 28. Substrate Preparation:   | Per ASTM F710 and the nora <sup>®</sup> Installation Guide  |

## 2.14 RUBBER STAIR ACCESSORIES

### A. Rubber Bannister Trim:

- |   |   |
|---|---|
| 1. Product Name:  | <b>nora<sup>®</sup> banister trim (A 5013 U), Article 744</b>   |
| 2. ASTM Specification:<br>ASTM F1861 Standard Specification for Resilient Wall Base | Type TP - rubber, thermoplastic   |
| 3. Limited Wear Warranty:   | 1 year, Defect  |
| 4. Material:  | nora <sup>®</sup> rubber compound 959 with abundant natural fillers and environmentally compatible color pigments |
| 5. Composition:   | Homogeneous rubber  |
| 6. Color:   | 35 standard colors  |
| 7. Surface:   | Smooth  |
| 8. Back of Banister Trim:   | Smooth  |
| 9. Material Dimensions:   |   |

	Length	8.2 feet (2.5m)
	Depth	0.7 inches (18mm)
	Height	1.6 inches (41mm)
	Thickness	0.35 inches (9mm)
10.	Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 1.0
11.	Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 147 (flaming) and 249 (non-flaming)
12.	Substrate Preparation:	Per ASTM F710 and the nora® Installation Guide
<b>B. Rubber Stair Nosings:</b>		
1.	Product Name:	<b>nora® T 5044 A/C stair nosing, Article 802, for flooring 0.8 inches (2mm) to 0.11 inches (2.7mm)</b> <b>nora® T 5044 E/F stair nosing, Article 802, for flooring 0.14 inches (3.5mm) to 0.16 inches (4mm)</b> <b>nora® T 5049 A/C stair nosing, Article 805, for flooring 0.8 inches (2mm) to .11 inches (2.7mm)</b> <b>nora® T 5049 E/F stair nosing, Article 805, for flooring 0.14 inches (3.5mm) to 0.16 inches (4mm)</b>
2.	ASTM Specification: ASTM F1861 Standard Specification for Resilient Wall Base	Type TP - rubber, thermoplastic
3.	Limited Wear Warranty:	1 year, Defect
4.	Material:	nora® rubber compound 961 with abundant natural fillers and environmentally compatible color pigments
5.	Composition:	Homogeneous rubber
6.	Color:	5 standard colors
7.	Surface:	Smooth
8.	Back of Nosing:	Smooth
9.	Material Dimensions:	Length 8.2 feet (2.5m) length Depth T 5049 2.0 inches (50mm), T 5044 2.75 inches (70mm) Thickness A/C 0.25 inches (6.5mm), E/F 0.31 inches (8mm) Height T 5049 1.77 inches (45mm), T 5044 1.69 inches (43mm)
10.	Flammability (E648/NFPA 253): ≥ 0.45 watts/sq. cm for Class 1 is required	NBSIR 75 950, 0.52
11.	Smoke Density (ASTM E662/NFPA 258): < 450 is required	NBS, 289 (flaming) and 273 (non-flaming)
12.	Burn Resistance:	Resistant to cigarette and solder burns
13.	Slip Resistance (ASTM D2047): ≥ 0.5 is required	Static coefficient of friction, Neolite dry 0.95, Neolite wet 0.94
14.	Bacteria Resistance (ASTM E2180/ASTM G21):	Resistant to bacteria, fungi, and micro-organism activity
15.	Latex Allergies (ASTM D6499):	Inhibition Elisa, results are below detection level
16.	Hardness (ASTM D2240):	Shore type "A", 92
17.	Oil & Grease Resistance:	No

- |   |   |
|---|---|
| 18. Heat Resistance (ASTM F1514):<br>Avg. $\Delta E \leq 8.0$ is required | Easily achieved with all batches and regular maintenance  |
| 19. Static Generation (AATCC 134/ANSI ESD S97.2):                         | < 2000 Volts at 20% RH  |
| 20. Cleaning:   | Cleaned and maintained effectively using water, nora <sup>®</sup> pads and a suitable cleaning machine, without the use of any factory and/or field-applied coatings. Also without using any chemicals that may be hazardous or containing any teratogenic, mutagenic or any other ingredients known to be carcinogenic. Refer to nora maintenance guides for product specific details.   |
| 21. Stain Removal:  | Samples of the product shall be provided for stain removal testing by the owner. Sample size shall be 24 inches by 24 inches, pre-cleaned by manufacture per published recommendations. Samples shall have no coatings, sealers, floor finish or other manually or mechanically applied finish on the surface of the product. Stain testing shall consist of application of common healthcare related disinfectants and chemicals to include, but not limited to, Betadine, Methylene Blue, Silver Nitrate and alcohol based hand sanitizer. Duration of test period shall be no less than one week. Removal of chemicals shall be in accordance with manufacturers published cleaning and maintenance recommendations. |
| 22. Substrate Preparation:  | Per ASTM F710 and the nora <sup>®</sup> Installation Guide  |

2.15 RESILIENT BASE AND ACCESSORIES

A. Rubber Wall Base:

- |  |  |        |                  |       |                    |        |                     |           |                   |
|--|--|--------|------------------|-------|--------------------|--------|---------------------|-----------|-------------------|
| 1. Product Name:   | <b>nora<sup>®</sup> sanitary base (S 3019 D), Article 817</b>  |        |                  |       |                    |        |                     |           |                   |
| 2. ASTM Specification:<br>ASTM F1861 Standard Specification for Resilient Wall Base  | Type TP - rubber, thermoplastic  |        |                  |       |                    |        |                     |           |                   |
| 3. Limited Wear Warranty:  | 5 years  |        |                  |       |                    |        |                     |           |                   |
| 4. Material:   | nora <sup>®</sup> rubber compound 959 with abundant natural fillers and environmentally compatible color pigments  |        |                  |       |                    |        |                     |           |                   |
| 5. Composition:  | Homogeneous rubber   |        |                  |       |                    |        |                     |           |                   |
| 6. Color:  | 25 standard colors   |        |                  |       |                    |        |                     |           |                   |
| 7. Surface:  | Smooth   |        |                  |       |                    |        |                     |           |                   |
| 8. Material Dimensions:  | <table border="0" style="margin-left: 20px;"> <tr> <td style="padding-right: 10px;">Length</td> <td>32.81 feet (10m)</td> </tr> <tr> <td style="padding-right: 10px;">Depth</td> <td>1.97 inches (50mm)</td> </tr> <tr> <td style="padding-right: 10px;">Height</td> <td>5.98 inches (152mm)</td> </tr> <tr> <td style="padding-right: 10px;">Thickness</td> <td>0.13 inch (3.2mm)</td> </tr> </table> | Length | 32.81 feet (10m) | Depth | 1.97 inches (50mm) | Height | 5.98 inches (152mm) | Thickness | 0.13 inch (3.2mm) |
| Length   | 32.81 feet (10m)   |        |                  |       |                    |        |                     |           |                   |
| Depth  | 1.97 inches (50mm)   |        |                  |       |                    |        |                     |           |                   |
| Height   | 5.98 inches (152mm)  |        |                  |       |                    |        |                     |           |                   |
| Thickness  | 0.13 inch (3.2mm)  |        |                  |       |                    |        |                     |           |                   |
| 9. Flammability (E648/NFPA 253):<br>$\geq 0.45$ watts/sq. cm for Class 1 is required | NBSIR 75 950, 1.0  |        |                  |       |                    |        |                     |           |                   |
| 10. Smoke Density (ASTM E662/NFPA 258):<br>< 450 is required                         | NBS, 147 (flaming) and 249 (non-flaming)   |        |                  |       |                    |        |                     |           |                   |
| 11. Substrate Preparation:   | Per ASTM F710 and the nora <sup>®</sup> Installation Guide   |        |                  |       |                    |        |                     |           |                   |



B. Rubber Wall Base:

- |   |  |
|---|--|
| 1. Product Name:  | <b>nora® wall base (S 1028 B), Article 820</b> |
| 2. ASTM Specification:                                    | Type TP - rubber, thermoplastic                |
| ASTM F1861 Standard Specification for Resilient Wall Base |  |
| 3. Limited Wear Warranty:                                 | 5 years  |
| 4. Material:  | nora® rubber compound 999                      |
| 5. Composition:   | Heterogeneous rubber                           |
| 6. Color:   | 70 standard colors                             |
| 7. Surface:   | Smooth   |
| 8. Material Dimensions:                                   |  |
|   | Length 120 feet (36.6m)                        |
|   | Depth 0.5" (12.7mm)                            |
|   | Height 4 inch (102mm)                          |
|   | Thickness 0.125 inch (3.175mm)                 |
| 9. Flammability (E648/NFPA 253):                          | NBSIR 75 950, 0.99                             |
| ≥ 0.45 watts/sq. cm for Class 1 is required               |  |
| 10. Smoke Density (ASTM E662/NFPA 258):                   | NBS, 258 (flaming) and 273 (non-flaming)       |
| < 450 is required   |  |
| 11. Substrate Preparation:                                | Per the nora® Installation Guide               |

PART 3 - GENERAL

3.1 GENERAL CONTRACTOR RESPONSIBILITIES

- A. Supply a safe, climate controlled building and subfloor as detailed in the nora Installation Guide (available at [www.nora.com/us](http://www.nora.com/us))
- B. A subfloor that meets the requirements of ASTM F710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring is required, or as detailed in the nora Installation Guide or nora® nTx Installation Guide as appropriate.
- C. A secure storage area that is fully enclosed, weather tight, and climate controlled between 63°F and 75°F and 40% to 60% ambient relative humidity (RH) for at least 48-hours prior and during the installation, so the flooring contractor can acclimate all materials.
- D. An installation area that is fully enclosed, weather tight, and climate controlled between 63°F and 75° and 40% to 60% ambient relative humidity (RH) for at least 48-hours prior, during, and 72-hours after installation (do not use gas fueled blowers). If this is not possible, contact the nora® Technical Department.
- E. Areas with direct prolonged exposure to sunlight should be protected with the use of Low E glass doors, windows or facades that reduce the UV transmissions to less than 1%.
- F. Areas of the flooring subjected to direct sunlight, for example through doors or windows, must be covered using blind, curtains, cardboard or similar materials for 24-hours before, during, and for a period of 72-hours after the installation to allow nora "wet" adhesives to cure. Do not allow traffic when using wet set adhesives for a minimum of 12-hours and prohibit rolling loads for 72-hours. When using nora® nTx or nora® dryfix 750, the flooring can be trafficked immediately with no restrictions. All flooring must be protected from damage during construction operations using Masonite, plywood or a similar product. Before laying the panels the flooring surface must be free of all debris. Lay panels so that they are edge to edge and tape the joints to prevent movement and debris entrapment. Inspect the flooring before covering and after removal for final acceptance.

- G. Conduct post-installation cleaning after 72-hours for wet set adhesives. Conduct post-installation cleaning immediately for installations using nora dryfix 750 or nora nTx. Refer to the appropriate nora<sup>®</sup> Maintenance Guide for product specific details.

### 3.2 FLOORING CONTRACTOR RESPONSIBILITIES

- A. Provide trained installers that have at least one of the following:
  - 1. Approved by nora systems, Inc. or INSTALL (International Standards & Training Alliance) certified for the requirements of the project.
  - 2. An effective installation manager to manage the project, installers, and ensure that all of the required procedures are followed as detailed in the nora Installation Guide (available at [www.nora.com/us](http://www.nora.com/us)).
- B. Follow all requirements in the appropriate nora Installation Guide or nora nTx Installation Guide.

END OF SECTION