nora® 312 A
Safety Data Sheet
According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 06/09/2015 Date of Issue: 06/02/2015 Version: 1.0

SECTION 1: IDENTIFICATION
1.1. Product Identifier
Product Form: Mixture
Product Name: nora® 312 A

1.2. Intended Use of the Product
Use of the Substance/Mixture: No use is specified.

1.3. Name, Address, and Telephone of the Responsible Party
Company
nora systems, Inc.
9 Northeastern Blvd
Salem, NH 03079
T 800-332-NORA
www.nora.com/us

1.4. Emergency Telephone Number
Emergency Number: 800-424-9300 CHEMTREC

SECTION 2: HAZARDS IDENTIFICATION
2.1. Classification of the Substance or Mixture
Classification (GHS-US)
Skin Irrit. 2 H315
Eye Irrit. 2A H319
Full text of H-phrases: see section 16

2.2. Label Elements
GHS-US Labeling
Hazard Pictograms (GHS-US):

Signal Word (GHS-US): Danger
Hazard Statements (GHS-US):
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
Precautionary Statements (GHS-US):
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, and eye protection.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other Hazards
Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US) Not available
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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Identifier</th>
<th>% (w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propanol, oxybis-, dibenzoate</td>
<td>(CAS No) 27138-31-4</td>
<td>3 - 7</td>
</tr>
<tr>
<td>Sodium oxide (Na₂O)</td>
<td>(CAS No) 1313-59-3</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Quartz**</td>
<td>(CAS No) 14808-60-7</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

*This product contains a material that may be hazardous when present as an airborne dust. Since this product is in a liquid form, the material is not able to become airborne and cannot be inhaled. Thus, the hazards usually associated with this material are not applicable to this product.

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water or soap and water for at least 15 minutes. Wash contaminated clothing before reuse. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: Causes serious eye irritation. Causes skin irritation.

Inhalation: May cause respiratory irritation.

Skin Contact: Causes skin irritation. Symptoms may include: severe skin irritation, redness, dermatitis.

Eye Contact: Causes serious eye irritation. Symptoms may include: redness, pain, swelling, itching, burning, tearing, and blurred vision.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂).

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Reference to Other Sections
Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures
General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray).

6.1.1. For Non-Emergency Personnel
Protective Equipment: Use appropriate personal protection equipment (PPE).

6.1.2. For Emergency Personnel
Protective Equipment: Equip cleanup crew with proper protection.
Emergency Procedures: Stop leak if safe to do so. Ventilate area.

6.2. Environmental Precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and Material for Containment and Cleaning Up
For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Notify authorities if liquid enters sewers or public waters.
Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections
See Section 8, Exposure Controls and Personal Protection. See Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling
Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for Safe Storage, Including Any Incompatibilities
Technical Measures: Comply with applicable regulations.
Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.
Incompatible Materials: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s) No use is specified

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters
For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH</th>
<th>ACGIH TWA (mg/m³)</th>
<th>ACGIH chemical category</th>
<th>REL (mg/m³)</th>
<th>REL (fraction)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH</td>
<td>ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
<td>0.025 mg/m³ (respirable fraction)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA ACGIH</td>
<td>ACGIH</td>
<td>ACGIH chemical category</td>
<td>A2 - Suspected Human Carcinogen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td>ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
<td>250 mppcf/%SiO₂+5, 10mg/m³/%SiO₂+2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA NIOSH</td>
<td>ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
<td>0.05 mg/m³ (respirable dust)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA IDLH</td>
<td>ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
<td>50 mg/m³ (respirable dust)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alberta</td>
<td>OEL TWA (mg/m³)</td>
<td>0.025 mg/m³ (respirable particulate)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>British Columbia</td>
<td>OEL TWA (mg/m³)</td>
<td>0.025 mg/m³ (respirable)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manitoba</td>
<td>OEL TWA (mg/m³)</td>
<td>0.025 mg/m³ (respirable fraction)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Brunswick</td>
<td>OEL TWA (mg/m³)</td>
<td>0.1 mg/m³ (respirable fraction)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Location</th>
<th>OEL TWA (mg/m³)</th>
<th>OSP (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newfoundland &amp; Labrador</td>
<td>0.025 mg/m³ (respirable fraction)</td>
<td></td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>0.025 mg/m³ (respirable fraction)</td>
<td></td>
</tr>
<tr>
<td>Nunavut</td>
<td>0.1 mg/m³ (respirable mass) 0.3 mg/m³ (total mass)</td>
<td></td>
</tr>
<tr>
<td>Northwest Territories</td>
<td>0.1 mg/m³ (respirable mass) 0.3 mg/m³ (total mass)</td>
<td></td>
</tr>
<tr>
<td>Ontario</td>
<td>0.10 mg/m³ (designated substances regulation-respirable)</td>
<td></td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>0.025 mg/m³ (respirable fraction)</td>
<td></td>
</tr>
<tr>
<td>Québec</td>
<td>0.1 mg/m³ (respirable dust)</td>
<td></td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>0.05 mg/m³ (respirable dust)</td>
<td></td>
</tr>
<tr>
<td>Yukon</td>
<td>300 particle/mL</td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure Controls
Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.


Materials for Protective Clothing: Chemically resistant materials and fabrics.
Hand Protection: Wear chemically resistant protective gloves.
Eye Protection: Chemical safety goggles.
Skin and Body Protection: Wear suitable protective clothing.
Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Environmental Exposure Controls: Do not allow the product to be released into the environment.
Consumer Exposure Controls: Do not eat, drink or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Beige paste</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>32 °F (0 °C)</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>32 °F (0 °C)</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>399.2 °F (&gt; 204 °C)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>199.4 °F (&gt; 93 °C) (tag closed cup)</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower Flammable Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper Flammable Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Vapor Density at 20 °C</td>
<td>Not available</td>
</tr>
<tr>
<td>Relative Density</td>
<td>Not available</td>
</tr>
</tbody>
</table>
Specific Gravity: 1.54
Solubility: Not available
Partition Coefficient: N-Octanol/Water: Not available
Viscosity: 60,000 - 80,000 cps
Explosion Data – Sensitivity to Mechanical Impact: Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge: Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity Hazardous reactions will not occur under normal conditions.
10.2. Chemical Stability Stable under recommended handling and storage conditions (see section 7).
10.3. Possibility of Hazardous Reactions Hazardous polymerization will not occur.
10.4. Conditions to Avoid Direct sunlight. Extremely high or low temperatures. Incompatible materials.
10.6. Hazardous Decomposition Products Carbon oxides (CO, CO₂).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product
Acute Toxicity: Not classified
LD50 and LC50 Data: Not available
Skin Corrosion/Irritation: Causes skin irritation.
Serious Eye Damage/Irritation: Causes serious eye irritation.
Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Teratogenicity: Not classified
Carcinogenicity: Not classified
Specific Target Organ Toxicity (Repeated Exposure): Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: May cause respiratory irritation.
Symptoms/Injuries After Skin Contact: Causes skin irritation. Symptoms may include: severe skin irritation, redness, dermatitis.
Symptoms/Injuries After Eye Contact: Causes serious eye irritation. Symptoms may include: redness, pain, swelling, itching, burning, tearing, and blurred vision.
Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.
Chronic Symptoms: None expected under normal conditions of use.

11.2. Information on Toxicological Effects - Ingredient(s)
LD50 and LC50 Data:
<table>
<thead>
<tr>
<th>Substance</th>
<th>LD50 Oral Rat</th>
<th>LD50 Dermal Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quartz (14808-60-7)</td>
<td>&gt; 5000 mg/kg</td>
<td>&gt; 5000 mg/kg</td>
</tr>
</tbody>
</table>

IARC Group 1
National Toxicology Program (NTP) Status Known Human Carcinogens.
OSHA Hazard Communication Carcinogen List In OSHA Hazard Communication Carcinogen list.
 SECTION 12: ECOLOGICAL INFORMATION
12.1. Toxicity No additional information available.
12.2. Persistence and Degradability Not available
12.3. Bioaccumulative Potential
12.4. Mobility in Soil Not available
12.5. Other Adverse Effects
Other Information: Avoid release to the environment.

 SECTION 13: DISPOSAL CONSIDERATIONS
13.1. Waste treatment methods
Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

 SECTION 14: TRANSPORT INFORMATION
14.1. In Accordance with DOT Not regulated for transport
14.2. In Accordance with IMDG Not regulated for transport
14.3. In Accordance with IATA Not regulated for transport
14.4. In Accordance with TDG Not regulated for transport

 SECTION 15: REGULATORY INFORMATION
15.1. US Federal Regulations
SARA Section 311/312 Hazard Classes Immediate (acute) health hazard
Quartz (14808-60-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
SARA Section 311/312 Hazard Classes Immediate (acute) health hazard Delayed (chronic) health hazard
Sodium oxide (Na₂O) (1313-59-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Phenol, 4-nonyl-, branched (84852-15-3)
SARA Section 311/312 Hazard Classes
Propanol, oxybis-, dibenzoate (27138-31-4)
Listed on the United States TSCA (Toxic Substance Control Act) inventory

15.2. US State Regulations
Quartz (14808-60-7)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

15.3. Canadian Regulations
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WHMIS Classification Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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Quartz (14808-60-7)
Listed on the Canadian DSL (Domestic Substances List)
Listed on the Canadian IDL (Ingredient Disclosure List)

<table>
<thead>
<tr>
<th>IDL Concentration</th>
<th>WHMIS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 %</td>
<td>Class D Division 2 Subdivision A - Very toxic material causing other toxic effects</td>
</tr>
<tr>
<td></td>
<td>Class D Division 2 Subdivision B - Toxic material causing other toxic effects</td>
</tr>
</tbody>
</table>

Sodium oxide (Na2O) (1313-59-3)
Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification
Class E - Corrosive Material

Propanol, oxybis-, dibenzoate (27138-31-4)
Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification
Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date: 06/09/2015
This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Other Information:

GHS Full Text Phrases:

<table>
<thead>
<tr>
<th>GHS Code</th>
<th>Full Text Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
</tbody>
</table>

Party Responsible for the Preparation of This Document
nora systems, Inc.
T 800-332-NORA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

North America GHS US 2012 & WHMIS 2