

## Installation Recommendations ESD (conductive + dissipative)

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In addition to the norament<sup>®</sup> and noraplan<sup>®</sup> installation recommendations the following must be observed:

1. On principle, we disapprove of the use of conductive primers since they reduce the absorbency of the subfloor.
2. All nora<sup>®</sup> ed/ec floor coverings must be fixed with a conductive adhesive, we recommend nora<sup>®</sup> ED 120. The suitability of alternative adhesives must be checked with the manufacturer.
3. noraplan<sup>®</sup> ed floor coverings (sheets and tiles) must always be joint-sealed with nora<sup>®</sup> 1-component cold weld. Joint sealing should take place no earlier than 24 hours after installation. Please be aware that the drying time for the cold weld is at least 12 hours (see processing recommendation "Joint sealing of nora<sup>®</sup> floorings").
4. If a minimum insulation for the protection of persons is required (see country specific regulations), it must be ensured that the insulation of the flooring is not impaired by humidity. Also, in order to meet the minimum insulation requirements in joint areas, sealing with nora<sup>®</sup> 1-component cold weld is necessary.

### Electrical discharge

Electrostatic discharges are dissipated via the top layer and conductive adhesive to a copper strip for potential equalisation.

### Copper Tape Installation Guidance

#### A. Areas with up to 40 m<sup>2</sup>

When installing norament<sup>®</sup> ed/ec, a copper tape (self-adhesive, approx. 10.0 mm x 0.08 mm) is fixed under the full length of each row of tiles. These tapes are connected to one another by a cross tape at the head end and then to the earthing point (responsibility of a qualified electrician).

When installing noraplan<sup>®</sup> ed/ec sheets or tiles, a copper tape is fixed to the prepared subfloor extending approximately 1.5 m centrally into the area from an earthing point. This 1.5 m of copper tape is enough to dissipate the electrostatic discharges for an area of 40 m<sup>2</sup> as the conductive adhesive assists in discharging the charge to the earthing point.

B. Areas exceeding 40 m<sup>2</sup>

For rooms of more than approx. 40 m<sup>2</sup> at least two connections to the earthing points are required. The dissipation of electrostatic discharges can be ensured in two ways:

1. For the installation of noraplan<sup>®</sup> ed/ec earthing points are incorporated into the room layout to allow for a copper tape strip of 1.5 m to extend into each area of 40 m<sup>2</sup> equally throughout the room.
2. For large areas with only few earthing points, a grid layout of the copper tape strip will provide a suitable alternative to guarantee the adequate dissipation capacity of the floor covering.

**General requirement for this second option:**

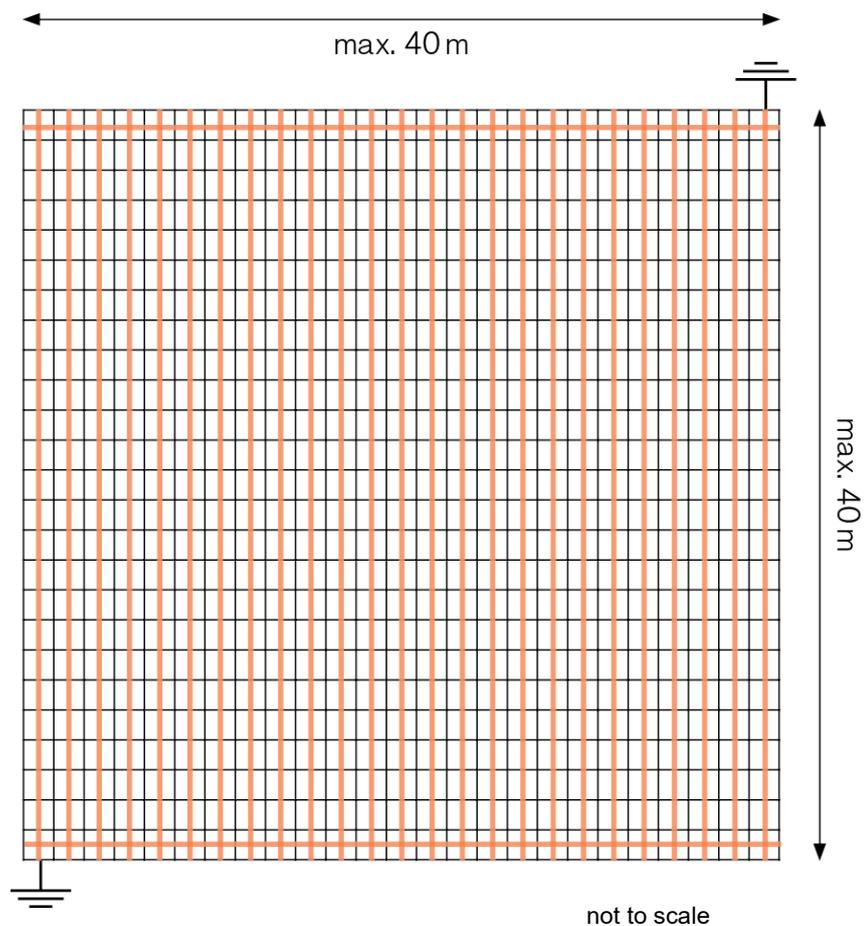
The distance between the measuring point and potential equalisation must not exceed 40 m.

The specific layout of this grid will then depend on which type of nora<sup>®</sup> floor covering is used:

**a) norament<sup>®</sup> ed/ec**

Copper strips are required under each row of tiles (North to South on Fig. 1). These copper strips must then be connected to one another by a lateral strip on the upper and lower surfaces (East to West on Fig. 1).

Fig. 1 - Example of a conductive and dissipative installation of norament<sup>®</sup> ed/ec tiles for large areas:



**Legend:**

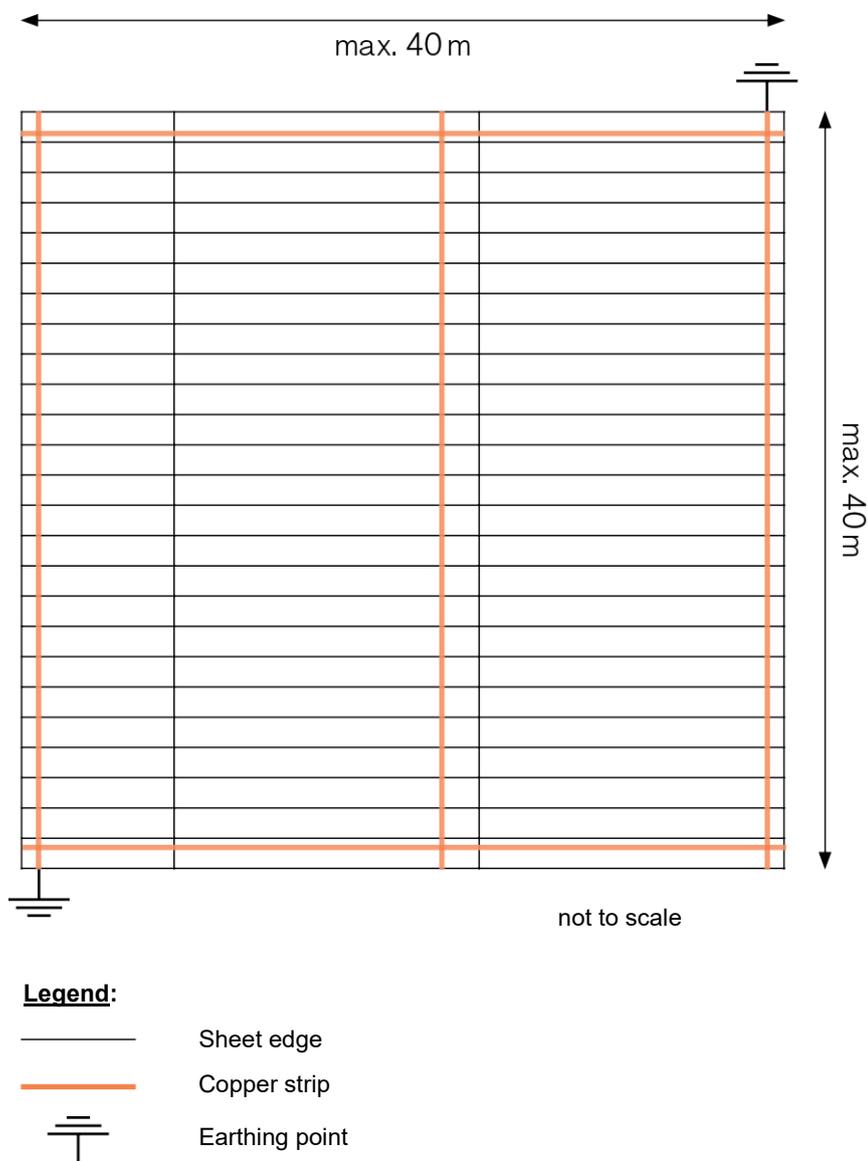
- Tile edge
- Copper strip
- ⏏ Earthing point

**b) noraplan<sup>®</sup> ed/ec sheets**

Each sheet length must be joined crosswise to its neighbouring sheet (North to South on Fig. 2) by copper strips.

These copper strips must then be connected to one another by a lateral strip on the upper and lower surfaces (East to West on Fig. 2).

Fig. 2 - Example of a conductive and dissipative installation of noraplan<sup>®</sup> ec/ec sheets for large areas:

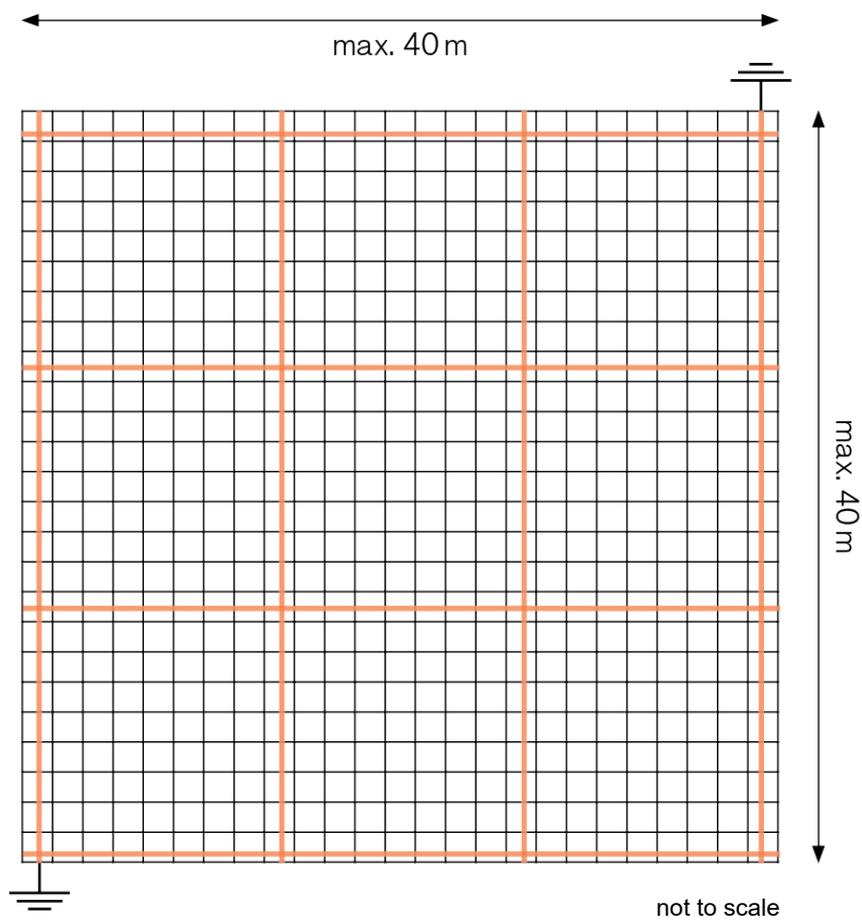


**c) noraplan<sup>®</sup> ed/ec tiles**

Copper strip must be installed around the perimeter tile of the room (North to South & East to West on Fig. 3).

Copper strips must then be fixed lengthwise (North to South) and across the width (East to West) under every 10<sup>th</sup> row of tiles.

Fig. 3 - Example of a conductive and dissipative installation of noraplan<sup>®</sup> ed/ec tiles for large areas:



**Legend:**

-  Tile edge
-  Copper strip
-  Earthing point