

## ESD-conductive top coat

### Characteristics

**HADALAN® ESD-LDS 12E** is a pigmented, solvent-free, ready-to-use 2-component flow coating made of epoxy resins. **HADALAN® ESD-LDS 12E** together with the conductive layer **HADALAN® ESD-LS 12E** meets the requirements for coating systems according to DIN EN 61340-5-1. **HADALAN® ESD-LDS 12E** forms a hard and robust, electrically conductive coating that is easy to clean and highly resistant to fuels and lubricants, as well as most solvents and many chemicals. **HADALAN® ESD-LS 12E** is a conductive, water-dispersed, solvent-free, ready-to-use 2-component coating compound made of high-quality epoxy resin. **HADALAN® ESD-LS 12E**, after mixing with the corresponding hardener, serves as a conductive layer for the coating system with the top coat **HADALAN® ESD-LDS 12E**. **HADALAN® ESD-LS 12E** is used as a conductive layer for industrial floors with high requirements for the dissipation of electrostatic charges.

- 2-C-EP conductive surface covering
- Self-levelling
- Electrically conductive
- Ready to use, filled
- Highly resistant to chemical and mechanical stress
- Seamless
- Smooth, easy to clean surface
- Totally solid according to test procedures of Deutsche Bauchemie e.v.

### Use

**ESD-LDS® 12E** is used for industrial flooring as a conductive coating for industrial floors that have to meet high demands regarding the ability to dissipate electrostatic charges, especially for the protection of ESD components.

### Areas of application:

- Explosion-proof industrial areas
- Operating rooms
- Clean rooms
- Power stations
- Substations and switching stations
- Electronics industry
- Automotive industry

### Specifications

Packaging	Tin bucket
Container	20 kg
Component A	16.4 kg
Component B	3.6 kg
Mixing ratio	4.55 : 1 PBW
Processing temperature (air, substrate, product)	+15 °C to +25 °C
Processing time <sup>1)</sup>	Approx. 20 minutes
Mixed density	Approx. 1.40 kg/l
Adhesive tensile strength	> 1.5 N/mm <sup>2</sup>
Earth leakage resistance	< 1 x 10 <sup>9</sup> Ω
Total resistance, system	< 1 x 10 <sup>9</sup> Ω
Mesh-shoe-floor	< 100V
Walking test	
Walkable (+20°C) <sup>1)</sup>	After approx. 24 hours
Full load capacity <sup>1)</sup>	
Mechanical	After 7 days
Chemical	After 28 days
Storage	Cool, frost-free and dry, 6 months

### Quantity required

Approx. 1.8 to 2.0 kg/m<sup>2</sup>

<sup>1)</sup> At +20 °C and 60% relative air humidity.

## Preparation of the surface

**HADALAN® ESD-LDS 12E** is applied to the conductive layer **HADALAN® ESD-LS 12E**. The conductive top coat of **HADALAN® ESD-LDS 12E** must be laid no later than 24 h after the previously applied conductive layer. Before installing the top layer **HADALAN® ESD-LDS 12E** the conductivity of **HADALAN® ESD-LS 12E** must be tested. The substrate must be clean and free of the release agent. Always check whether the substrate is open-pored, porous or similar, as in these cases bubbles or pores can form in the conductive layer. This must be checked by the craftsman and subsequently processed.

Make sure that no substances containing silicone or other reaction-impeding substances come into contact with the coating before and during the curing phase.

## Application

The product is supplied in 2-component containers in matching quantities. Before processing, the material must always be heated to at least the ambient temperature (room and floor temperature). Mix the A-component for at least approx. 1 - 2 minutes, then empty the B-component completely into the A-component. Stir both components again with a suitable electric mixer for approx. 1 - 2 minutes. Avoid stirring in air. Prior to use, decant the material into a suitable, fresh container and stir again. Pour **HADALAN® ESD-LDS 12E** onto the surface to be coated and apply using a serrated blade (serrated blades special 95). For better deaeration, the fresh coating should be deaerated with a spiked roller (deaeration roller plastic spiked) after a waiting period of 10 – 15 minutes. Nailed shoes must be worn for this purpose (spiked shoes).

## System products

HADALAN® ESD-G 12E  
HADALAN® ESD-LS 12E

## Important notes

The substrate must be protected from rear and pressing moisture. The characteristic data are approximate values that we have determined and are not intended to guarantee any specific properties. Liability claims can therefore not be derived from the product data sheet. EP resins are generally not colour-stable in the long term under UV and weathering influences and/or tend to yellow. The technical data sheet does not exempt the user from carrying out their own tests with regard to applicability and suitability.

Abrasive loads can lead to scratching of the surface. All information can vary or deviate depending on the object, installation and substrate conditions as well as the temperature. Chemical reactions are delayed at low temperatures. This prolongs the time needed for reworking and walking on the surface. The higher viscosity of the products also increases material consumption. The chemical reactions shorten at higher temperatures. Always protect the material from water exposure during processing. Furthermore, the material must be protected against direct water exposure for approx. 24 hours (at +20 °C) after application. During this time, the exposure to water (e.g. dew, condensation water) can lead to a white discolouration (carbamate formation) on the surface or the surface becomes sticky at these points. This circumstance can impair the adhesion to the subsequent coatings. Excessive air humidity can impair the curing process. The substrate temperature must be at least +3 °C above the dew point temperature. Slight colour deviations are unavoidable for raw material-related reasons. Own tests are indispensable. Under UV and weathering influences, epoxy resins are generally not permanently colour-stable or tend to yellow. Artificial UV light can also change the colour tone and likewise lead to yellowing. The technical properties remain unchanged. For technical reasons, the conductive component is optically visible. The conductivity can be impaired by the use of care products. Traces of processing may remain visible on manually applied coating systems. This applies in particular to glancing light or larger contiguous areas; if necessary, produce a trial surface. Use only material from one batch for contiguous surfaces.

## Safety provisions/recommendations

Information regarding the safety during transport, storage and handling are included in the updated safety data sheets.

## Disposal

The local waste removal regulations must be observed.

## Manufacturer

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This information is based on extensive tests and practical experience. However, it cannot be applied to every type of application. If in doubt, we recommend that you test the product before using it. Due to continuous product improvement, this information is subject to change without notice. Our General Terms and Conditions apply.  
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