EPISOL® FLOORLINE ESD

SELF-LEVELLING AND CONDUCTIVE EPOXY FLOORING SYSTEM – LIGHT TO HEAVY DUTY

DESCRIPTION

EPISOL® FLOORLINE ESD is a self-levelling, 3-component epoxy flooring system, electrostatically conductive, suitable for ESD areas (EPA) or ATEX zones, finished with a topcoat of EPISOL® PU 43 OP MAT EL.

ADVANTAGES

- Electrostatically conductive
- Limited layer thickness
- High wear resistance and mechanical strength
- Excellent flow
- Liquid tight
- Maintenance friendly

Additional benefits thanks to the EPISOL® PU 43 OP MAT EL topcoat:

- Low light reflection - matt finish
- Anti-slip – R9 / R12 (with glass beads)
- Very high mechanical, scratch and chemical resistance
- Very high UV-Resistance

FIELD OF APPLICATION

EPISOL® FLOORLINE ESD is the base layer of the RESIPLAST® EP SL UVM ESD (PM/C) system, combined with the EPISOL® PU 43 OP EL topcoat. See also the system data sheet for more information. This system is suitable for ESD areas (EPA) or protected zones against electrostatic discharge (ESD) risks, as well as ATEX zones or areas exposed to explosion risks.

Typical application areas and industries include:

- Industry, logistics and storage areas (flammable substances or liquids)
- Explosion risk areas
- Laboratories and clean rooms
- Computer rooms and data centres
- Electronics industry
- Pharmaceutical and chemical industry
- Food industry
- Energy production and mining
- Battery charging stations
- Automotive industry
- Aerospace, aviation and defence industry
- etc...

APPLICATION

Note: The following is a typical application description. In case of other jobsite parameters, please contact our technical department.

PRELIMINARY ANALYSES

EPISOL® FLOORLINE ESD is part of the electrostatic conductive system. Consult the technical data sheets of the RESIPLAST® EP SL UVM ESD (PM/C) system. See also the 'Complementary Products' section of this product data sheet. Always apply EPISOL® FLOORLINE ESD onto the conductive water-based epoxy primer EPISOL® EL WB. The self-adhesive copper strips must be installed prior to the application of the conductive primer EPISOL® EL WB, either on a first non-electrostatic primer EPISOL® or on an additional scratch or levelling layer. The copper strips are always installed along the perimeter of the room, approximately 30 cm from the wall. The strips must be connected to at least two grounding points. For surfaces larger than 400 m², an additional copper strip grid with 20-metre spacing should also be installed. When a seamless skirting or a local repair is needed, use RESIPOX® epoxy for repair and skirting work after applying the EPISOL® UNIVERSAL primer to the substrate. Application and curing conditions for EPISOL® FLOORLINE ESD: see the "Application Conditions" section in this technical data sheet.

REQUIRED TOOLS

- Mixer with spindle (min. 300 rpm)
- Notched rake with a triangular profile (profile adjustable in function of layer thickness)
- Plastic deaeration rol or spike vent roller (25 cm wide and a diameter of 80 mm) with pins of 15 mm length.
- Masking tape

PREPARATION OF THE SUBSTRATE

Always apply the product onto a cured EPISOL® PRIMER EL WB layer, on a clean substrate free from any material that may reduce adhesion, such as dirt, oil, grease, contamination from other products or surface treatments, etc. Areas of the substrate that do not meet the requirements (minimum compressive strength of 25 MPa, minimum tensile strength of 1.5 MPa, poorly bonded sections, etc.) must be treated, removed and repaired using a proper method and products compatible with the substrate and the synthetic resin flooring system to be installed. Loose or non-adherent parts must be carefully removed by brushing, and the dust must be removed using an industrial vacuum cleaner.

PREPARATION OF THE PRODUCT

Premix component A (resin) homogeneously before use. Add the total quantity of hardener (component B) and mix mechanically (300 rpm) until both components are fully homogeneous. Slowly add the filler (component C). Continue mixing until a fully homogeneous mass is obtained.

PREPARATION OF THE EQUIPMENT

Always work with clean mixing containers and application material.

APPLICATION

Pour EPISOL® FLOORLINE ESD onto the cured EPISOL® EL WB primer and spread evenly using a flat trowel or pin rake. After 15 to 30 minutes, deaerate the surface with a spiked roller, rolling first in one direction and then crosswise to ensure complete deaeration.

FINISHING

Pour EPISOL® FLOORLINE ESD onto the cured EPISOL® EL WB primer and spread using a flat trowel or a notched trowel. Deaerate with a spiked roller after 15 to 30 minutes.

APPLICATION CONDITIONS

The recommended substrate application temperature is between +12 °C and +30 °C, and ideally between +15 °C and +25 °C.
Relative humidity: maximum 85 %.
Dew point: the surface temperature must be at least 3 °C above the dew point. Avoid condensation on the surface from the start of preparations until full curing of the products. Ensure adequate ventilation during curing.

CLEANING AND MAINTENANCE

Clean the tools used with MEK solvent before EPISOL® FLOORLINE ESD has cured. Cured product residues must be removed mechanically. For the cleaning and maintenance of the installed synthetic resin flooring system, please refer to the information brochures:
Cleaning and maintenance of synthetic resin floor systems - INDUSTRY
Cleaning and maintenance of synthetic resin floor systems - PUBLIC AND PRIVATE BUILDINGS.

COMPLIMENTARY PRODUCTS

System RESIPLAST® EP SL UVM ESD (PM/C):

- Primer: EPISOL® UNIVERSAL
- Levelling layer / scratch coat: EPISOL® UNIVERSAL filled with M4 quartz flour, resin : filler weight ratio = 1 : 1.5.
- Profiled and self-adhesive copper strips
- Conductive primer: EPISOL® PRIMER EL WB
- Coloured topcoat: EPISOL® PU 43 OP MAT EL
- Optional: RESIGRIP 150 glass beads (5% by weight mixed into the topcoat)

Other

- Tool cleaning solvent: SOLVENT MEK
- Epoxy repair mortar: RESIPOX®

TECHNICAL DATA

APPEARANCE - COMPOSITION

A-component	Modified epoxy resin
B-component	Modified polyamine hardener
C-component	Dry filler
Colours	Sand yellow, Sky blue, Evergreen, Misty grey, Stone grey, Anthracite Grey
Surface	Smooth, Satin gloss

REACTION TIMES

Pot-life: 15 minutes
Processing time after mixing: 30 minutes
Tack-free: after 8 hours
Pedestrian traffic and overcoatable: after 12 hours
Light vehicular traffic: 48 hours
Full mechanical load: after 4 days
Full chemical resistance (incl. for water): after 7 days
Full curing: after 7 days
Times measured at 20 °C; lower temperatures extend the curing time.

CONSUMPTION

2.25 - 2.4 kg/m² to achieve a layer thickness of 1.5 mm.

TECHNICAL DATA

Density	EN ISO 2811-1	1.70 ± 0.05 kg/dm³
Heat resistance	Internal	60 °C
Curing	Internal	Shrink-free
Hardness Shore-D	EN ISO 868	75 – 85
SYSTEM RESIPLAST® EP SL UVM ESD (PM/C)		
Conductivity – Earth resistance R_2	EN 1081	5.10^4 – 1.10^7 Ω
Conductivity – Earth resistance R_g	IEC 61340 4-1	≤ 10^9 Ω
Resistance person-shoe-floor	IEC 61340 4-5	≤ 10^9 Ω
Body voltage (walking test)	IEC 61340 4-5	≤100 V
Compressive strength	EN 12190/ EN 196-1	40 ± 2 N/mm²
Bond strength – pull-off	EN 1542	≥ 2,0 N/mm²
Wear resistance - BCA Without glass beads / with glass beads [1] - Taber CS-10/1000g/1000c - Taber H-22/1000g/1000c	 EN 13892-4 EN ISO 5470-1 EN ISO 5470-1	 AR 0.5 < 45 / 15 mg < 25 / 80 mg
Slip resistance Without glass beads / with glass beads [1] - Pendulum test (dry) (SRT rubber 96) - Pendulum test (wet) (SRT rubber 96) - Tribometer test (dry) - Tribometer test (wet) - Shod ramp test (oil) with DGUV rule 108-003 table 1	EN 16165 (= EN 13036-4) (= EN 13036-4) (= NEN 7909) (= NEN 7909) (Replaces DIN 51130)	 56 / 72 25 / 58 0,35 / 0,58 0,20 / 0,60 R9 / R12

[1] To achieve very high anti-slip values under wet and oily conditions, 5% (by weight) of RESIGRIP 150 glass beads are added to the topcoat mixture.

CHEMICAL RESISTANCES

Good chemical resistance against alkalis, petroleum derivatives, battery acid, diluted organic acids, salts and solutions. Please contact KORACHEM NV for further information.

CHEMICAL RESISTANCES

Mechanical resistance P/M:

i	p	r	u
4	4	2	4

Chemical resistance P/C:

a1	a2	b1	b2	s1	s2	s3	s4	s5
4	4	4	4	4	3	4	4	4

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CE MARKING

CE	
KORACHEM NV, Gulkenrodestraat 3, 2160 Wommelgem, Belgium	
12	
EN 13813	
Synthetic resin floor/coating for indoor use in buildings	
Release of corrosive substances	SR
Abrasion resistance	≤ AR0,5
Adhesion strength	≥ B2,0
Impact resistance	≥ IR10
Electrical resistance	≤ ER10000
Reaction to fire	E_{fl}

REFERENCE DOCUMENTS

FM 78518 EMS 716699

Test reports classification PM/C nr. DSR-SI-25-39656/A and /B of 07/04/2025.

Certificates for electrostatically conductive flooring system (ESD/ATEX):

- Mijtech 250077ecv2 of 02/04/2025

Test report for slip resistance (EN 16165):

- Mijtech reports 240192rv2 and 240196rv2 of 09/09/2024

PACKAGING

EPISOL® FLOORLINE ESD	Comp A	Comp B	Comp C
Set 31,5 kg	11.5 kg	5 kg	15 kg

STORAGE AND SHELF LIFE

Store EPISOL® FLOORLINE ESD in a dry, well-ventilated storage area between +5 and +35 °C.
Shelf life: 24 months after production date.
C component shelf life: unlimited.
In case of doubt, please contact KORACHEM NV and state the batch number on the packaging. Do not discharge into groundwater, surface water of sewers. Dispose of contaminated packaging and residues in accordance with the applicable legal requirements.

SAFETY PRECAUTIONS

Carefully read the safety data sheets before using EPISOL® FLOORLINE ESD. Ensure adequate ventilation, keep away from sources of ignition and do not smoke. Avoid skin contact. Eye irritation and/or hypersensitivity may occur with severe vapour concentration, inhalation and/or skin contact. Do not store food (food, drinks) in the same workspace. Always wear personal safety equipment in accordance with the applicable local guidelines and legislation. Gloves and safety glasses are mandatory.