



GREMMLER®

BAUCHEMIE

GI 127 ESD-Coating

- Solvent free and tough coating

Product description

Application / Properties

GI 127 is a solvent free, filled and pigmented epoxy resin based dual-component reaction plastic. In combination with our conductive layer GI 125 the product is used in inside areas which are subjected to the special requirements regarding the prevention of ESD-sensitive devices. GI 127 is formulated for areas with high mechanical and chemical stress. Classic areas of application are for example cleanrooms within automotive manufacturing areas and at corresponding suppliers, electronic industry, in hospitals and within explosion protected storage rooms.

Generally smooth coatings are made by the use of GI 127. These coatings are tough, glossy, easy to clean, easy to decontaminate and feature high abrasion resistance.

GI 127 permanently guarantees - in combination with the conductive layer GI 125 - the required values according to EN 61340-5-1:2007. The resistance to EPA-earth is less than $1 \times 10^9 \Omega$ and the resistance floor/footwear is in between $7.5 \times 10^5 \Omega$ and $3.5 \times 10^7 \Omega$ (measuring method according to EN 61340-4-1). The maximum generated voltage of a person with ESD footwear according to EN 61340-4-5 (walking test) is less than 100 V. This system has been tested by the Kiwa Polymerinstitut GmbH, test report No. 7106 A. The real resistance values depend on the used ESD-footwear.

In its completely cured state GI 127 is resistant to water, seawater and sewage water. It is also resistant to many lye solutions, diluted acids, salt solutions, mineral oils, lubricants, fuels and many solvents (discoloration is possible).

A certain amount of colour change and chalking must be expected under the influence of UV light because of the binding material that has been used. Epoxy resins tend to chalking. This has to be considered by choosing colour and intended use.

Color / Package item / Shelf life

Color:

RAL 7032; other colors on request

Package item:

30 kg; other units on request

Shelf life:

12 months after production date

Storage in original sealed units

Dry, cool and free of frost

TECHNICAL DATA:

Density at 23 °C / 50 % rel. hum. of air:

approx. 1.47 g/cm^3

Adhesive strength:

> Concrete fracture

Leak resistor (EN 61340-4-1:2004) measuring device MetrISO 2000:

$R_{E \text{ SYSTEM}} < 10^9 \Omega$

Resistance footwear / floor

(EN 61340-4-1:2004, Measuring device: MetrISO 2000):

$7.5 \times 10^5 \leq R_q \leq 3.5 \times 10^7 \Omega$

Walking test (EN 61340-4-5:2004, Measuring device: Voltmeter):

< 100 V

Solids Content:

100 %

Viscosity (25 °C, V03.4/V03):

Component A: 5.000 – 7.500 mPas

Component B: 100 – 200 mPas

Mixture viscosity: approx. 1.100 mPas



APPLICATION

Mixing ratio:

3 : 1 (by weight)
1,96 : 1 (by volume)

Material consumption:

1.8 – 2.2 kg/m²

Processing time (at 50 % rel. hum. of air):

15 – 20 minutes (30 °C)
30 – 40 minutes (20 °C)
50 – 70 minutes (10 °C)

Tack free time (at 50 % rel. hum. of air):

min. 8 – 12 hours, max. 12 hours at 30 °C
min. 16 – 20 hours, max. 24 hours at 20 °C
min. 24 – 36 hours, max. 48 hours at 10 °C

Curing (complete mechanical stress at 50 % rel. hum. of air):

3 days (30 °C)
7 days (20 °C)
10 days (10 °C)

Application/Substrate:

The substrate has to be non-slip, clean, to be able to take loads and to be free of separating substances like fats, oils, etc. and at least dry.

The coating has to be made on a prepared, primed and with our conductive layer GI 125 pre-coated substrate.

Care regarding the earth groundings has to be taken into account.

Coating has to follow within the recoating time on the conductive layer.

Application/Tools:

scraper - preferably with triangular toothed blades

Application/Mixing:

Pour the curing agent completely into the main component. Mix intensively with a slow rotating stirrer (recommendation: double stirrer with shafts that rotate in opposite directions). Pour into a different vessel and mix there intensively again to avoid bad spots. Before applying onto the substrate a homogeneous mass, free of streaks has to be achieved.

GI 127 is ready formulated. Under no circumstances additional fillers may be added to the coating mass.

Application:

The product is poured onto the prepared area and uniformly spread on the floor with a trowel or a scraper - preferably with triangular toothed blades. If necessary deaeration can be made by use of a spiked roller. In case of perturbations arising from the substrate the coating indeed has to be deaerated.

Upon bigger areas, care regarding the processing time has to be taken into account to avoid / minimize colour differences and edges.

Application/General:

Material, air and substrate temperatures have to be measured and have to be between 10 °C and 30 °C during the whole application.

Furthermore care has to be taken into account that the substrate temperature is always 3 °C above the dew point temperature.

Relative humidity of air may not exceed 80 %.

The product should be applied at a constant or decreasing temperature in order to avoid blistering by expansion of air in the substrate. Good ventilation after application and during curing has to be ensured.

During the complete curing phase the area has to be protected against direct contact with water.



CE-LABELLING:

Products which fall under specifications regulated by a harmonized standard or for which a European Technical Assessment has been issued have to be labeled in accordance with Annex III of Regulation (EU) No 305/2011 (Construction Products Regulation) with the CE-mark.

DIN EN 13813:2002 „Screed material and floor screeds – screed materials – properties and requirements“ sets the rules for screed materials used for floor construction indoors. Coatings and Sealers are included in this regulation as well.

The EN 1504-2: 2004 „Products and systems for the protection and repair of concrete structures - Definitions, requirements, quality control and evaluation of conformity - Part 2: Surface protection systems for concrete“ specifies the requirements for hydrophobic impregnations, impregnations and coatings, which are used for the surface protection of concrete. Flooring systems that are exposed to significant mechanical stresses also have to fulfill the requirements of the EN 13813.

For more detailed information please refer to the corresponding declaration of performance.

Data base:

The determination of all the data and application information is based in laboratory tests. Measured values in practice may differ because of influences beyond our control.

Legal foundation:

The following specifications as well as the recommendations for handling and use of our products are based upon our knowledge and experience under normal conditions, at proper storing and application. Because of different materials, substrates and working conditions other than given normal values, a warranty of a working result or a liability – for whatever legal relationship - cannot be justified from these instructions or a verbal guidance respectively, unless intent or gross fault can be imputed to us. Here, the user has to prove that he had transferred in written form, in time and completely every knowledge that is necessary for an appropriate and promising estimation. The user is obliged to test the products on their suitability for the intended purpose. Incidentally our respective terms and conditions of business are valid. You get these on www.gremmler.de. Only the newest edition of this technical data sheet is valid.

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SAFETY INFORMATION:

Only for professional users.

For safe handling of epoxy resins and their curing agents we do recommend attention to the following leaflets as a matter of principle:

Leaflet BG-Regel BGR 227, Handling of Epoxy resins. (Ed.: Berufsgenossenschaft der Chemischen Industrie).

Furthermore the relevant physical, safety-related, toxicological and ecological data have to be taken from the specific material safety data sheets.

Disposal:

Completely cured material may be disposed via domestic waste.

Hand residual emptied units over to Recycling. Liquid material has to be disposed of as paint waste which contains solvents or other dangerous substances.

VOC-Directive 2004/42/EG:

Category IIA/j Type Ib < 500 g/l VOC
(limit 2010)