

Product 01054400 2-C EP coating for VIASOL ESD, conductive, total solid, coloured

## 1 General Data

### Fields of application

VIASOL EP-C544 ESD is a conductive, anti-static coating for use in industrial flooring where is a high requirement for the dissipation of electrostatic charges in accordance with the ESD standard (DIN EN 61340-5-1) as well as sufficient protection from touch voltage. It finds use in clean rooms, electronic production areas, areas of application include microelectronic assembly rooms, computer chip manufacturing, measuring instrument manufacturing, electronic test laboratories and other areas where ESD standards are required.

### Product description

VIASOL EP-C544 ESD is a pigmented, ready-to-use, solvent-free (total solid) 2-component coating compound of high-grade epoxy resin. VIASOL EP-C544 ESD will be applied on the conductive layer VIASOL EP-E436 to obtain a tough, electrically conductive coating according to the ESD standards DIN EN 61340-4-1, 61340-4-5 and DIN EN 51340-5-1. Coating systems with VIASOL EP-C544 ESD are easy to clean and exhibit a good level of resistance to fuels and lubricants, most solvents and many other chemicals.

In general, epoxy resins are not colour stable when they are exposed to UV light or under influence of weathering. In special applications we recommend to apply a colour stable and conductive sealer.

### VIASOL systems

VIASOL EP-C544 ESD is used as coating for the VIASOL system:

VIASOL **UNIVERSAL ESD**

### Care and maintenance

For the first two weeks just clean the floor with a dry dust mop, in the following two weeks just with a matt damp mop.

For a long-term preservation of the properties of resin floors, we recommend a regular cleaning and care program. For further details see our VIASOL care and maintenance guide. Before first use we recommend to perform a basic cleaning with initial care for conductive floorings.

### Technical support

For system build up possibilities and detailed information relating to the application of VIASOL products, please refer to the VIASOL system planner or contact VIACO Polymer GmbH directly.

Phone: +49 (0)7472-949990

E-Mail: [info@viacor.de](mailto:info@viacor.de)

### Manufacturer:

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#### (A) Technical data

##### Liquid mixture (A+B)

1. Solids content	98 %
2. Density (20°C)	1,5 g/cm <sup>3</sup>
3. Viscosity (20°C)	2800 – 3800 mPas
4. Packaging size (2-component container)	25 kg (19,5 kg A + 5,5 kg B)
5. Colours	VIASOL standard, other colours upon request
6. Shelf life (20 °C)	12 month in closed, original container
7. Storage	Dry at bei 10 – 25°C, avoid direct sunlight

#### (B) Technical data

##### Cured material

1. Flexural strength (DIN EN 196)	20 N/mm <sup>2</sup>
2. Compressive strength (DIN EN 196)	44 N/mm <sup>2</sup>
3. Adhesive strength (DIN EN ISO 4624)	> 2.5 N/mm <sup>2</sup>
4. Abrasion resistance (DIN EN ISO 5470-1)	60mg / 1000 cycles (Taber CS10)
5. Shore-D-hardness (DIN EN ISO 868)	58 (7 days / 23°C)
6. Resistance to earth* with Insulation tester ET-150 PC (DIN EN 61340-4-1)	< 10 <sup>9</sup> Ω (23°C/50%rel.hum.)
7. Body voltage with walking test -Kit ET 200* (DIN EN 61340-4-5)	< 100 V (23°C/50%rel. hum.)
8. Resistance Footwear/Person/Floor R <sub>E</sub> * with ESD footwear VITAFORM, R <sub>s</sub> < 5 MΩ (DIN EN 61340-4-5)	< 3.5 x 10 <sup>7</sup> Ω (23°C/50%rel. hum.)

\* The surface must regularly be checked for its ESD properties. The review is carried out according to a progress report "Conductive Coatings for industrial floors" of the German Construction Chemicals e. V. If the RE <3.5 x 10<sup>7</sup> Ω is higher, but the body voltage is <100 V, the functionality of the conductivity meets according to DIN EN 61340-5-1.

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## 2 Application methods

### Substrate preparation

The substrate must be clean and free from dust and loose particles. All traces of contaminants such as oils, fats, greases, paint residues, chemicals, algae and laitance should be removed.

VIASOL EP-C544 ESD is poured onto the conductive layer VIASOL EP-E436 (the conductivity of the conductive layer must be checked before). VIASOL EP-C544 ESD must be applied no later than 24 hours after the previous layer has been applied.

### Application

The product is delivered in ready-to-use 2-component containers in the exact mixing ratio. The A-component must be stirred for at least 2-3 minutes. Then the entire content of the B-component is emptied into the A-component container and the two components are mixed until homogeneous using a suitable electric stirrer (for at least 2–3 minutes). The inclusion of air in the mixing process is to be avoided. The mixture is poured into another container and briefly stirred again. We recommend the application by equal batch numbers.

Then the mixture should be filled with 20-30% quartz sand VIASOL QS F32 (0,1 - 0,3mm). It should be poured into a different container and stirred again briefly.

VIASOL EP-C544 ESD is poured onto the surface and spread over the entire area using a serrated spatula (tooth size no. 25) (layer thickness control). The fluid coating must be rolled with a spiked roller, as required. The operative wears spiked shoes to walk on the still wet coating.

For cleaning of tools and other contaminations VIASOL SO-X10 tool cleaner is used.

The surface must be protected from moisture exposure for the first 2 weeks (at 20°C)!

### Overcoating

It is not necessary to abrade the surface if the following coat is applied within 24 h. After 24 h, the application can only take place after a careful grinding of the surface.

### (C) Technical data

#### Liquid mixture (A+B)

1.	Mixing ratio: A : B	100 : 28 (by weight)
2.	Working time (20°C)	20 – 25 min.
3.	Application temperature	10 – 30°C (mind. 3 K above dew-point)
4.	Material consumption VIASOL EP-C544 ESD (binder) binder incl. filler QS F32	1.7 – 2.0 kg/m <sup>2</sup> 2.0 – 2.5 kg/m <sup>2</sup>
5.	Ready for food traffic (20°C)	after 2 - 3 days
6.	Following coating (20°C)	within 12 – 24 hours
7.	Fully capable of withstanding stress mechanical (20°C) chemical (20°C)	after 7 days after 28 days

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### 3 Further information

#### CE-Mark



##### CE Mark according to EN 13813

EN 13813 "Screed material and floor screeds – properties and requirements" specifies requirements for screed material for use in floor construction internally. Resin flooring and sealer coats are also covered by this standard.

For details see CE mark and Declaration of Conformity.

#### Decopaint-Guidelines (EU 2004/42/EG)

The maximum allowable VOC content for Product Category IIA j Type Lb products (in the ready to use state) is:  
Stage II (from 2010) < 500 g/l VOC

In the ready to use state, this product contains less than 500 g/l VOC.

#### Warnings and precautions

Information relating to the safe handling of this product can be found in the Material Safety Data Sheet. Local regulations concerning the safe handling of epoxy resin based coating materials must be observed.

Suitable protective clothing including suitable eye protection must be worn.

#### Disclaimer

All information in this technical data sheet is based on our current knowledge and experience. This does not release the applicator from performing their own tests as many application factors, beyond our control, affect the application of our product. No guarantee of characteristics or suitability for a special purpose can be derived from this information. All present data, descriptions, drawings, photos, ratios, weights etc. are subject to change without prior notice and do not represent contracted characteristics of the product.

Due to different materials, sub-bases and working conditions, no guarantee of an application result or any liability claims can be derived from these details or from an unwritten technical advice except for liability claims based on:

- damage to life, body or health resulting from a negligent violation of obligations or a deliberate or negligent violation of obligation of a legal representative or assistant and

- if we are charged with intention or gross negligence.

The user has to test the products for their intended use. The user is responsible for following existing laws and orders and for observing third party trade mark rights.

As all VIACOR data sheets are updated on a regular basis it is the users responsibility to obtain the most recent issue (see [www.viacor.de](http://www.viacor.de) or contact us directly).

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