

## Flowchem VE ESD RC-resin

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### Product description

Flowchem VE ESD RC is a conductive, anti-static, modified and shrinkage compensated vinyl ester based resin with excellent chemical and mechanical resistance.

### Features and Key Benefits

- Fulfilling the ESD requirements according to EN IEC 61340-4-1 and 61340-4-5 when applied in a system.
- Fast curing
- Excellent temperature resistance. In service up to 145°C peak.
- Very high chemical resistance to a wide range of acids, alkalis and solvents.
- Shrinkage compensated

## Product Information

### Applications

Flowchem VE ESD RC is used for protection of prepared and primed concrete and metal surface on walls, floors, upstands, equipment bases, drainage gulley's, sumps and containment bunds etc ..., against a wide range of aggressive chemicals and thermal attack.

### Certificates/approvals

CE according EN 13813 (when used as part of complete system)

### Environment and Health

Follow the appropriate Occupational Health and Safety Guidelines applicable to the location where the application is undertaken.

For more information, please refer to the safety datasheets for the individual components.

## Technical Information

### Technical Characteristics (liquid state)

Appearance	A: Flowchem VE ESD RC resin - black liquid B: Flowchem VE Accelerator – purple liquid C: Flowchem VE Curing Agent – transparent liquid D: Flowchem VE Topcoat Additive – transparent liquid
Mixing ratio (A/B/C/D*)	100 / 0.3 / 2 / 1.5 by weight
Pot life at 10 / 20 °C	90 / 45 min
Density at +23°C (EN ISO 1183)	1.12 kg/dm <sup>3</sup> (mixed A/B/C)
Min. overcoat time at +20°C	2 hours
Foot traffic at +20°C	12 hours
Curing time at +20 °C:	Full cure: after 3 days

\* Part D is only used in the final layer..

### Technical Characteristics (cured state)

Volume shrinkage at 20°C – Rili4 2.5.3.2.1	< 0.004%
Tensile Strength (ISO 527)	73 MPa
Flexural Strength (ISO 178)	125 MPa
E-Modulus (EN ISO 178)	3100 MPa
Barcol Hardness (EN ISO 59)	>40 (model GYZJ 934-1)

### Colour

Carbon black, satin gloss

### Packaging

The Flowchem VE ESD RC components are supplied in the following pack sizes:

- Flowchem VE ESD RC resin: in lacquered metal drums of 25 kg.
- Flowchem VE Accelerator: in metal cans of 1 kg
- Flowchem VE Curing Agent: in plastic bottles of 1 kg
- Flowchem VE Topcoat Additive: in metal cans of 1 kg

### Storage

Store in dry area, in unopened, original containers in temperatures +5 °C to +25 °C. Protected from freezing, out of direct sunlight, moisture or contaminant ingress.

## Shelf-life

Flowchem VE ESD RC-resin: 6 months from manufacture day when stored correctly in the original, unopened packaging as supplied.

Flowchem VE Accelerator, Curing agent and Topcoat Additive: 9 months from manufacture day when stored correctly in the original, unopened packaging as supplied.

## Usage Guidelines

### Application conditions

Ambient temperature range:	+5°C - +30°C
Substrate temperature range:	+5°C - +30°C
Ambient relative humidity:	< 95 %
Substrate relative humidity	<4.5 % (Tramex scale or 75% RH BS8203)

- To ensure best application behaviour of material it is recommended to condition the containers for at least 24 hours in +15 °C - +25 °C prior to application.
- The recommended substrate temperature is 15 - 25°C, but not less than 5°C and more than 30°C.
- **During application and initial curing of product, substrate temperature needs to be at least 3°C higher than dew point temperature.**
- To assess possibility of application outside of these conditions or application temperatures, please consult our Technical Department.
- The styrene in the resin component can be smelt at very low concentrations (from 2 ppm onwards). Follow the appropriate national guidelines.

### Surface Preparation

Substrates must be mechanically prepared to be free of cement laitance, dust, oil and any other contamination, any surface defects and blowholes must be prefilled and levelled.

The substrate pull-off value must be tested to be at least 1.5 MPa and the surface profile / roughness of the concrete must be at least 0.5 mm.

For further details see our "General Preparation and application guidelines for Flowchem VE floor protection systems".

## Mixing

Mix the whole drum of Flowchem VE ESD RC Resin with an electric drill and paddle to disperse any possible settlement.

Weigh out the required quantity and add 0.3% (b/w) of Flowchem VE Accelerator and mix well for 2 mins (Note: the % of the accelerator required can increase at lower temperatures please consult our Technical Department for specific advice).

Add 2% (b/w) of Flowchem VE Curing Agent and continue to mix thoroughly for 2-3 mins and then the resin is ready for application.

**Note: Never mix the Accelerator directly with the Curing Agent.**

## Application

### Priming the surface

The prepared concrete surface must first be sealed with Flowchem VE Primer (non-conductive) and then the appropriate copper tape grid (64 m<sup>2</sup>) is installed before the conductive Flowchem VE ESD Primer is applied. The copper grid must also be correctly connected to earth by an authorized person.

### Priming the surface with Flowchem VE ESD primer

The Flowchem VE ESD Primer must be prepared and applied fully in accordance with the respective Technical Data Sheet. Allow to cure for ± 2 hours (at 20°C), at least until it gets 'tacky' before overcoating with the next layer of the ESD System build-up.

### Application of Flowchem VE ESD RC

The mixed FLOWCHEM VE ESD RC is applied by roller or brush, evenly and uniformly in 2 to 3 layers to obtain a total dry film thickness of between 600 µm to 1 mm. (allow to cure in between layers).

Add 1.5% Flowchem VE Topcat Additive in the final layer. This paraffin mixture will give a harder and more silky like surface

Graded Silicium Carbide (typically 0.6 – 0.85 mm) can be broadcast into the penultimate layer to obtain an anti-slip finish. When broadcast, any excess must be removed by brush/vacuum when the resin has hardened and before overcoating.

## Coverage

Normal application rate / consumption on a uniform surface should be approx. 0.35 kg/m<sup>2</sup>/coat. A total 1000 µm dry film thickness requires approximately 1.1 kg/m<sup>2</sup> of the mixed resin.

## Cleaning

Clean using Flowchem VE Equipment Cleaner. **Acetone should be used during the application** to clean the Teflon or Metal deaeration rollers! Not styrene (it will make everything sticky).



## Technical Service

Contact Tremco CPG “Country”

## Guarantee

Tremco CPG “Country” warrants all goods to be free from defects and will replace materials proven to be defective but makes no warranty as to appearance of colour. The information and recommendations herein are believed by Tremco CPG “Country” to be accurate and reliable.