Flowfresh ESD SL

Product Description

Flowfresh ESD SL is a predosed, four component, water-based hybrid polyurethane concrete self-levelling conductive flooring:

- Component A: a polyol emulsion
- Component B: a polyisocyanate curing agent
- Component C: a coloured mix of quartz, cement and additives. Contains Polygiene, an antimicrobial additive based on silver ion technology.
- Component D: mixture of conductive materials

Features and Key Benefits

- Fulfilling the ESD requirements according to EN IEC 61340-4-1 and 61340-4-5
- Waterproof and non-porous
- Contains Polygiene an antimicrobial additive based on silver ion technology

Product Information

Applications

Flowfresh ESD SL is an anti-static, heavy-duty, hard-wearing floor with a smooth surface with good thermal, mechanical and chemical resistance.

Certificates and Approvals

CE according EN13813 (when used as part of complete system)
Approved in accordance with the standards EN IEC 61340-4-1, EN IEC 61340-4-5, DIN EN 1081 and DIN VDE 0100-600.
Indoor Air Comfort Gold (when used as part of complete system)[1]

[1]Indoor Air Comfort Gold certificate means that product/system is compliant with wide range of VOC Emissions regulations, including BREEAM, LEED and others. For detailed information please contact your local Tremco CPG representative.

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Construction Products Group Europe

Tremco CPG Iberia, S.L.U.
Delegación España y Portugal
Ronda Maiols, 1 Edificio BMC, Local 135-137
08192 Sant Quirze del Vallès · Barcelona I España
www.flowcrete.es

Environment and Health

Flowfresh ESD SL is a solvent free product. Follow the appropriate Occupational Health and Safety Guidelines applicable to the location where the application is undertaken.
In all cases, Technical and Safety Data Sheet must be read and understood before use.

Technical Information

Mixing ratio (A/B/C/D)	2x 2.5/ 2x 2.6 /16.73 / 0.04 kg
Mixed density at 23°C (ISO 2811)	1.7 kg/l
Pot-life at 20°C (gel-timer)	+/- 15 min
Solid content (%)	94.2

Colours

See the system data for Flowfresh ESD SL

Chemical Resistance

See CR table of Flowfresh ESD SL

Packaging

Flowfresh ESD SL is delivered in prepacked units of 26.97 kg to facilitate mixing. The product is delivered A+B+C+D in the following packs.

Unit	Part A	Part B	Part C	Part D
26.97 kg	2x 2.5 kg	2x 2.6 kg	16.73 kg	0.04 kg

Product information:

- Part A = Flowfresh/Flowcrete part A
- Part B = Flowfresh/Flowcrete STD part B
- Part C = Flowfresh ESD SL part C
- Part D = Flowfresh/Flowcrete ESD SL part D

Remarks:
Larger packs of Part A and Part B are available on request.

A warmer climate grade Flowfresh/Flowcrete TRP part B is available and optimised for use in application temperatures 20 – 40°C (STD is for 10-30°C). Please ensure that the correct grade of hardener is used for the application conditions.

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Storage

All parts of Flowfresh ESD SL should be stored under cover and free of the ground, in dry conditions above 5 °C and below 30 °C. This is especially important for the C component to prevent them becoming hard and lumpy and unsuitable for use. The last 24hrs before processing the material should be between 18°C and 25°C.
Keep all parts free from freezing even during transport. Exposure to direct sunlight or other intense heat sources will cause uneven temperature gradients in the stored material; such product must not be used until the temperature has become uniform, otherwise application inconsistencies may arise.

Shelf Life

In unopened packaging:

- Component A, B and D: at least 12 months after manufacturing day
- Component C: 6 months after manufacturing day

Usage Guidelines

Application Conditions

Ambient temperature range:	+15°C - +25°C
Substrate temperature range:	+15°C - +25°C
Ambient relative humidity:	40 < xx% < 85
Substrate relative humidity (for Flowfresh Primer)	< 6% (TRAMEX scale) or < 97% RH (BS 8203)

In above mentioned temperatures resin flow is optimized for best application effect and assumed material consumptions can be maintained. Application temperatures lower than 12°C will reduce flow/levelling and result in an inferior finish.
During application and initial curing of product, substrate temperature needs to be at least 3°C higher than dew point temperature.
Do not allow ambient temperature to drop below +5°C during first 24 hours after application.

Surface Preparation

Flowfresh ESD SL can be applied on concrete and polymer modified screeds. For other substrates consult Tremco CPG “Country”.

Surface condition:
The substrate should be installed according to established engineering practice for substrate to receive an industrial polymer-based floor system. Surface preparation is the most vital aspect of all flooring applications. The preparation operations should be delayed until shortly before

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the Flowfresh Primer or Scratchcoat (Flowcrete SL or Flowfresh SL) is to be applied to avoid the risk of fresh contamination or further accumulation of dirt. To avoid rising humidity or pressure of groundwater, make sure a waterproofing membrane exists below the substrate.

For new concrete and screeds:
A mechanical treatment (scabbling or shotblasting) is always necessary to remove laitance and to obtain an open surface for a good adhesion. All loose debris and dirt should be removed.

For old concrete and screeds:
Degreasing in case of oil and fats. Never use solvents, they tend to push oil into the concrete. In case of serious contaminations, Acetylene flame cleaning followed by mechanical treatment is required. For a good adhesion, a mechanical scabbling or shotblasting is always necessary to obtain a porous substrate. All loose debris and dirt should be removed. The substrate temperature should be at least 3°C above the dew point during application.

Properties of the substrate:

Age:	Concrete & screeds	28 days
Compressive strength after 28 days:	Concrete Screeds	≥ 25 N/mm² ≥ 25 N/mm²
Slope:	Maximum 25 mm/m	
Tensile strength:	1.5 MPa	

Anchorage grooves are needed wherever there is a free edge of the Flowfresh floor systems.

Priming

Prepared concrete substrates are to varying degrees porous. Flowfresh ESD SL is never applied directly to prepared concrete. Flowfresh Primer or Scratchcoat (Flowcrete SL or Flowfresh SL) are used. Apply Flowfresh Primer with a consumption of ~~0.25~~0.3 – 0.5 kg/m² or Scratchcoat with a consumption of 1.5 kg/m². After curing, a Cu-strip is glued on top of the cured primer and connected with the earth. A connection is made for each 64 m². On top of the cured Flowfresh Primer or Scratchcoat , is the Peran ESD Primer WB applied with a consumption of ± 150 gr/m².

Wear Layer

Mixing and application of Flowfresh ESD SL:
Component D is poured in the liquid component A between 1 and 24 hours in advance to avoid fiber agglomerate during application. Afterwards component D and A are mixed into the pail for 2 minutes. When the conductive grains are transformed in fibres and the liquid resin mix is homogeneous with these fibres, then the component B is added. Mixing for 1 minute until the mix is homogeneous.
When the mixture is homogeneous, add half of the C component and thoroughly made wet with resin. Then repeat by adding the other half of the C component. The mixing time may vary slightly

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depending on ambient and material temperature. When the mix is homogeneous with no lumps, bring the material to the workplace without delay. The material is levelled, each mix being well connected to the previous one. To obtain a smoother surface and remove trowel marks the upper surface of the Flowfresh ESD SL must be thoroughly spike rolled. Make sure that packages are completely emptied before mixing.

Remarks:
For the best mixing results, we recommend the use of a forced mixer.

Coverage

For a thickness of 2-2.3 mm: max. 4 kg/m².

Application Time/Pot Life

Ready mixed product should be used within 10 minutes at a temperature of 20°C.
At higher temperatures (and if left in the bucket) the application time is shorter. Decant mixed product into smaller quantities if applying/detailed areas.

Curing Time (at 20°C)

Can be overcoated after 16 hours, maximum overcoat time 24 hours.
Can be walked on after 8 hours. Light traffic after 24 hours, heavy traffic after 48 hours.
The product achieves a full chemical cure after 7 days.
Do not cover or wash within the first 36 hours of curing.

Cleaning

Clean tools with solvent immediately after application.

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.

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Flowcrete
for the world at your feet

CE Certification – see the Declaration of Performance for details

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