

## Flowshield ESD SL (2mm)

An antistatic, hard-wearing, abrasion resistant, self-smoothing gloss finish resin flooring system.

Typically used in sensitive environments such as electronic, laboratory, defence and clean room environments.



### Antistatic:

Meets EN IEC 61340-5-1 antistatic standard requirements.



### Attractive:

Brightens and enhances workspace environments.



### Low Maintenance:

Seamless, hygienic finish, which requires low maintenance.



### Abrasion Resistant:

Hard wearing, durable and abrasion resistant coating.

## Technical Profile

### FIRE RESISTANCE - AS/ISO 9239.1

CHF Value	6.6 kW/m <sup>2</sup>
Smoke Value	398% (Mean)

### SLIP RESISTANCE

Method described in AS4586-2013	P1 Rating
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### TEMPERATURE RESISTANCE

Softens over 60°C

### WATER PERMEABILITY

Karsten Test	Nil (Impermeable)
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### ABRASION RESISTANCE

Taber Abrader 1kg load using CS17 wheels	80mg loss per 1000 cycles
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### COMPRESSIVE STRENGTH

BS6319	60 N/mm <sup>2</sup>
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### FLEXURAL STRENGTH

BS6319	40 N/mm <sup>2</sup>
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### TENSILE STRENGTH

BS6319	25 N/mm <sup>2</sup>
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### BOND STRENGTH

ASTM D4541 (Pull-Off Test)	> 1.5MPa*
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### ELECTRICAL RESISTANCE

EN IEC 61340-5-1	< 1 x 10 <sup>9</sup> Ω
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### CHEMICAL RESISTANCE

Contact Technical Department

SPEED OF CURE***	10°C	20°C	30°C
Foot Traffic	36 h	24 h	16 h
Vehicular Traffic	72 h	48 h	36 h
Full Chemical Cure	12 d	7 d	7 d

\*\*Assume concrete or substrate is a minimum of 25 N/mm<sup>2</sup>.

\*\*\*These figures are typical properties achieved in laboratory tests at 20°C and at 50% Relative Humidity.



Terracotta



Serpentine



Bluebell



Light Grey Blue



Pastel Grey



Light Grey



Bridge Grey



Dark Grey



Straw



Mushroom

The applied colours may differ from the examples shown. For a full colour chart and samples, contact your local Flowcrete office. Due to the incorporation of conductive materials in this product, actual finished floor colour and finish may be affected, this variation may be more evident in lighter colours.

## Substrate Requirements

Concrete or screed substrate should be a minimum of 25 N/mm<sup>2</sup>, free from laitance, dust and other contamination. Substrate should be dry to 75% RH as per ASTM F2170 (AS1884:2012). Slab on ground concrete must have an effective damp proof membrane in place.

## Installation Service

The installation should be carried out by a qualified contractor with a documented quality assurance scheme. For details of our recommended contractors, contact your local Flowcrete office. Detailed application instructions are available upon request.

## Environmental Considerations

The finished system is assessed as non-hazardous to health and the environment. The long service life and seamless surface reduce the need for repairs and maintenance. Environmental and health considerations are controlled during manufacture of the products by Flowcrete staff.

## Aftercare, Cleaning & Maintenance

Clean regularly using a single or double headed rotary scrubber drier in conjunction with a mildly alkaline detergent. Please refer to Flowcrete's Cleaning & Maintenance Guide for further information.

## Warranty

Flowcrete products are guaranteed against defective materials and manufacture and are sold subject to our standard 'Warranty, Terms and Conditions of Sale', copies of which can be obtained on request. Warranty does not cover suitability, fit for purpose or any consequential or related damages. Please review warranty in detail before installing the products.

## Safety Precautions

Wear appropriate Personal Protective Equipment (PPE) including masks, gloves, eye protection and protective clothing during mixing and application. Ensure the working area is well ventilated and follow the appropriate Health and Safety guidelines applicable to the location where the application is undertaken.

## Important

This specification assumes a concrete compressive strength greater than 25 N/mm<sup>2</sup>, application and curing temperatures of 5–35°C, the presence of an effective damp proof membrane below substrate and concrete moisture content less than 75% RH. If moisture content is above 75% RH, please contact Flowcrete Australia.

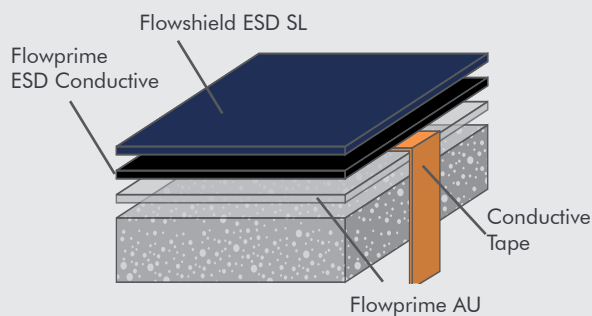
This specification must be read in conjunction with relevant product technical data sheets and the application of all materials is to be strictly in accordance with manufacturer's instructions.

## Model Specification

<b>System</b>	Flowshield ESD SL
<b>Finish</b>	Gloss
<b>Thickness</b>	2mm
<b>Manufacturer</b>	Tremco CPG Australia Pty Ltd
<b>Contact</b>	+ 61 7 3205 7115

Preparatory work and application in accordance with manufacturer's instructions.

## System Design



## Products Included In This System

<b>Layer 1</b>	Flowprime AU
<b>Layer 2</b>	Flowprime AU <i>*For porous substrates only</i>
	Conductive grid of 12mm wide Conductive Tape
<b>Layer 3</b>	Flowprime ESD Conductive
<b>Layer 4</b>	Flowshield ESD SL

## Manufacturer Details

<b>Manufacturer</b>	Tremco CPG Australia Pty Ltd
<b>Address</b>	63 Radley Street
<b>Suburb</b>	Virginia
<b>State</b>	QLD
<b>Postcode</b>	4014
<b>Telephone</b>	+61 7 3205 7115
<b>Email</b>	australia@flowcrete.com

## Outline for Installation

<b>Mechanically Prepare Substrate</b>	
<b>Apply Flowprime AU</b>	@ 0.2kg/m <sup>2</sup>
<b>Apply Flowprime AU</b> <i>*For porous substrates only</i>	@ 0.2kg/m <sup>2</sup>
<b>Apply Flowprime AU ESD Conductive</b>	@ 0.08kg/m <sup>2</sup>
<b>Apply Flowshield ESD SL</b>	@ 3.6kg/m <sup>2</sup>

## Storage

<b>Time</b>	12 Months in Unopened Packs. If longer than 12 Months consult Flowcrete.
<b>Temperature</b>	Storage temperature between 5°C and 35°C.
<b>Protection</b>	Should be stored inside and protected from frost, weather, moisture, direct sunlight and contamination ingress.

## Material Set-Up

Before commencing work ensure that your material is set-up by separating all components (e.g. Base A, Hardener B, Filler C etc.) to ensure that all material is correct. Check product labels and ensure there are equal amounts of product.

## Site Set-Up

Before commencing work ensure that your site is set-up. Mark the floor according to the specification with masking tape or similar to clearly identify what area (m<sup>2</sup>) each unit will cover. If this is not achieved (greater or less consumption than the specified amount) immediately stop and contact Flowcrete.

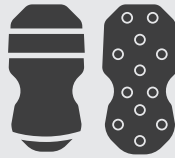
## Application Equipment

The use of correct application equipment is critical as incorrect application tools can result in poor finishing and incorrect material consumption. Always test the application equipment prior to commencing work.

The following equipment is recommended for this application.



10-12mm Nap Roller  
\*Do not use Microfibre



Spike Shoes



Slow Speed Drill with  
Helical Mixer Head



Squeegee



Flat & Notched Steel  
Trowel



Spike Roller



Pin Rake

## Surface Preparation

Concrete should be finished by steel trowel. Surface preparation is to be completed by totally enclosed (light shot blasting) or coarse diamond grinding. All cementitious laitance must be removed to expose a sound substrate and provide a dry, dust free, open textured surface. All hard to reach areas and areas around the perimeter must be prepared using hand held preparation equipment.

Any damaged areas must be repaired with Flowtex F1 mortar. Consult Flowcrete prior to using an alternative repair mortar. Any rough or uneven areas must be made smooth with Flowcoat SC (Universal Resin Base A, Universal Hardener B, Sand/Flour). Consult Flowcrete prior to using an alternative epoxy scratch coat.

## Application Temperature

The recommended material and substrate temperature is 5 - 35°C, but no less than 5°C. The temperature of the substrate should exceed the "dew point" by 3°C during application and hardening.

Temperatures should not fall below 5°C in the 24hrs after application.

## Application / Pot Life

Ready-mixed product should be used within 20 minutes at a temperature of 20°C. At higher temperatures (or if left in bucket) the application time is shorter.

Decant mixed product into smaller quantities if applying small/detailed areas.

## Application of Flowprime AU

The substrate must be surface dry before the application of Flowprime AU.

### 1. Mixing Flowprime AU

Decant required amount of material by weight using digital scales.

Stir Base A to re-disperse any settlement. Add Hardener B to the Base A container, and drain thoroughly. Mix with a slow speed drill and helical spinner head for 1 minute, taking care not to entrain air. Transfer to a clean container and remix for 30 seconds.

Add between 2 - 7% (if required depending on conditions) Xylene and mix for a further 30 seconds.

### 2. Application

Immediately after mixing, apply the Flowprime AU by squeegee and/or roller.

If required, apply a 2nd coat of Flowprime AU as above within 24 hours at 20°C.

## Application of Conductive Tape

A network of 12 mm wide, self-adhesive, conductive copper tape is always recommended in combination with any Flowcrete antistatic flooring system. The copper tape must be applied directly onto the cured Flowprime AU, maximum 1 metre in from the perimeter of the application.

Further, strips of tape should be applied within this area every 3 metres. Special attention should be paid to tape areas passing over expansion or bay joints to ensure permanent electrical continuity. The applied tape should be secure and fully bonded to a confirmed earth point. Conductive tape grid should terminate at Flowcrete Earthing Point, please refer to Flowcrete technical bulletin correct installation details.

## Application of Flowprime ESD Conductive

The previous coat must be surface dry before the application of Flowprime ESD Conductive.

The Flowprime ESD Conductive must be applied within 24 hours at 20°C following the application of Flowprime AU.

### 1. Mixing Flowprime ESD Conductive

Stir Base A to re-disperse any settlement and add to the Pigment container. Add Hardener B to the Pigment container, and drain thoroughly. Mix with a slow speed drill and helical spinner head for 1 minute, taking care not to entrain air. .

### 2. Application

Immediately after mixing, apply the Flowprime ESD Conductive by roller. It is important that the material is applied to the specified coverage rate, over applying the material can negatively effect the ESD properties. Allow to cure before testing overnight.

## Testing

Before applying the Flowshield ESD SL, the Flowprime ESD Conductive must be tested to ensure the correct ESD properties have been achieved. Refer to Flowcrete ESD Testing Information Sheet.

## Application of Flowshield ESD SL

The previous coat must be surface dry before the application of Flowshield ESD SL. Flowshield ESD SL must be applied within 24 hours at 20°C following the application of Flowprime ESD Conductive.

## 1. Mixing

Stir Part A to re-disperse any settlement. Transfer to a new container and add Part A Filler. Mix until Uniform. Add Filler D and mix until fibres have separated and are thoroughly dispersed, mix using a slow speed drill and helical spinner, maximum 650rpm. Add Pigment (if supplied separately) and mix until uniform. Add Hardener B to the container and drain thoroughly. Mix using a slow speed drill and helical spinner, maximum 650rpm for 60 seconds, taking care not to entrain air. Add Filler C and mix until uniform.

## 2. Application

Immediately after mixing, apply the Flowshield ESD SL by pin rake and/or notched and/or flat steel trowel to the required thickness. It is important that the material is applied to the specified coverage rate, over applying the material can negatively effect the ESD properties. Immediately spike roll the surface to assist with levelling and to release any entrained air. If required this process can be repeated after approximately 20 minutes at 20°C. Allow to cure.

## Testing

Allow the Flowshield ESD SL to cure for 48 hours at 20°C prior to testing. Refer to Flowcrete ESD Testing Information Sheet.

## Cleaning

Tools and equipment can be cleaned with MEK/Acetone/Xylene. Please refer to SDS when using solvents.

## Trafficking

Allow to cure for a minimum of 24 hours at temperatures no less than 20°C before foot traffic and 72 hours before vehicular traffic.

## Note

When printed or saved externally, this document is uncontrolled and therefore may not be the latest version. Any recommendation or suggestion relating to the use of the products made by Tremco CPG Australia Pty Ltd., whether in its technical literature, or in response to a specific enquiry, or otherwise, is based upon data believed to be reliable, however the products and information are intended for use by Customers having requisite skill and know-how in the industry and therefore it is for the Customer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that the Customer has done so at its sole discretion and risk.

## Additional Notes

1. Maximum overcoat time is 24 hours at 20°C.
2. The product has reached full chemical cure after 7 days at 20°C.
3. The applied colours may differ from the examples shown.
4. Light and vibrant colours may require additional coats to achieve desired results.
5. Flowcrete assumes no responsibility for the application of incorrect colour.
6. It is the applicators responsibility to verify accuracy of colour prior to application. Flowcrete does not bear any responsibility or accept claims for incorrect colour after application of material.
7. It is recommended that top coat colours match base coat colours to achieve desired results.
8. This system is not UV stable and will discolour unless otherwise stated.
9. This system should have no contact with water for 5 days at 20°C or blooming may occur.
10. This system should be installed at 3°C above the dew point.
11. A low temperature/high humidity environment can cause blooming issues.
12. Please ensure application temperature and RH limits are followed.
13. Wind or strong airflow may cause quick curing and drying of the system.

14. Ensure wind or strong airflow is eliminated during application, however adequate safety ventilation should still be followed.
15. Direct heat during application of the system can cause flash curing and potential delamination. Ensure you do not apply this system to substrates with temperatures exceeding 35°C.
16. The specific slip test rating (P0-P5 range) noted in this document is based on the system design, products listed, coverage rates and specific aggregate outlined in this document. This slip test rating can and will change if the standard specification details or installation methods are altered in any way. The specific slip rating (P0-P5 range) noted in this document is based on 96 Rubber slide testing on level non-inclined surfaces. Applicators should refer to methods outlined in AS4586-2013 and SA HB 198:2014