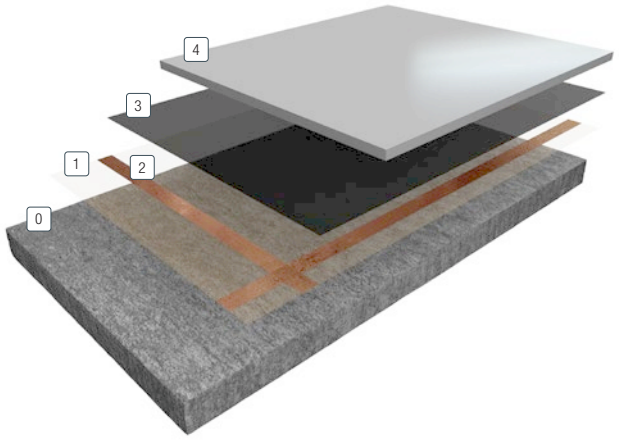
RESUFLOR™ TOPFLOOR ESD

STATIC-DISSIPATIVE EPOXY RESIN SELF-LEVELLING FLOOR SYSTEM

Resuflor Topfloor ESD is a static-dissipative resin based flooring system which is installed at 3 mm nominal thickness providing an electrical conductivity leakage resistance <109 ohms when tested to BS EN 61340-4-1:2004+A1:2015. The system comprises conductive fillers with selected epoxy resin components and pigments to provide an aesthetically pleasing finish with resistance against chemical attack and abrasion. It is ideal for production areas and clean room type situations where a static-dissipative smooth tough and hygienic floor is required.



Traffic	Cure to service (hrs)		
	10ºC	20ºC	30ºC
Light	24-36	12-16	8-12
Designed	72-96	48-72	36-48
Full cure	8 days	up to 7 days	5 days

0 **Substrate:**

1 **Primer:**
Resuflor WB Clear

2 **Earthing tape:**
Copper tape

3 **ESD primer:**
Resuprime ESD

4 **Screed:**
Resuflor SL ESD

BENEFITS

- Seamless
- Static dissipative
- Gloss finish
- Silica free
- Extremely hard wearing
- Hygienic
- Good chemical resistance
- Smooth finish for precise operation equipment.

SCOPE OF USE

- Laboratories
- Electronic production areas
- Workshops
- Printing and packaging areas
- Food manufacture and processing
- Power station areas
- Studios
- Automotive production
- Pharmaceutical and chemical plant processing.

TYPICAL PHYSICAL PROPERTIES

Hardness @ 24 hours, Shore D	BS ISO 7619-1:2010	79
Abrasion resistance	BS EN 13892-4:2002	AR 0.5
Compressive strength	BS EN ISO 604:2003	38.6 MPa
Tensile strength	BS EN ISO 527-2:2012	9.2 MPa
Flexural strength	BS EN ISO 178:2010+A1:2013	24 N/mm²
Bond strength	BS EN 13892-8:2002	>3 N/mm² (substrate failure)
Impact resistance	BS EN 1504-2:2004	Class II
Temperature resistance	Tolerant of temperatures up to 60°C at 3 mm	
Chemical resistance	Good	
Reaction to fire	BS EN 13501-1:2018	CFL – s1
UV stable	No	
FerFa class	Class 5	
System thickness	3 mm	

SYSTEM COMPOSITION

VOC EC Solvent Emissions Directive

Component	Product	Application	VOC	Theoretical consumption
Primer	Resuflor WB Clear	Roller	85 g/L	0.14 kg/m²
NB: An additional application of Primer may be required on porous surfaces to ensure a fully sealed surface.				
Earthing tape	Copper tape	Adhesive	n/a	n/a
ESD Primer	Resuprime ESD	Roller	139 g/L	0.23 kg/m²
Screed	Resuflor SL ESD	Trowel	81 g/L	6 kg/m² (3 mm depth)

APPLICATION GUIDANCE

IMPORTANT INSTALLATION NOTE

Sherwin-Williams materials shall only be installed by approved contractors. The following information is to be used as a guideline for the installation of the system in conjunction with the product data sheets used for the system. Contact Sherwin-Williams Technical Service Department for assistance prior to application. Email: technicale@sherwin.com or Tel: +44 (0)1204 556457.

SUBSTRATE REQUIREMENTS AND SURFACE PREPARATION GENERAL CONSIDERATIONS

Sherwin-Williams flooring systems can be applied to a variety of substrates. Proper surface preparation is required, specific of the substrate type. Concrete is the most common substrate and this document states surface preparation guidance for this specific substrate. Other types of substrate can be covered too. Please contact Sherwin-Williams Technical Service Department prior to starting the project to obtain guidance on surface preparation for specific substrate or condition.

CONCRETE – SUBSTRATE REQUIREMENTS

To achieve the best performance from Resuflor Topfloor ESD substrates must be clean, sound, dry and free of surface laitance with a minimum strength of 25 N/mm².

Ideally substrates should be free from rising damp and water pressure and it is good practice to take a moisture content reading of a concrete substrate, particularly for any new slabs.

If substrates have moisture levels above 75% RH as per BS8204, or if no damp proof membrane is present then Resuprime MVT can function as a surface applied damp proof membrane as the primer as advised in with the product data sheet. The number of coats of Resuprime MVT will be dependent on the moisture content.

CONCRETE – SURFACE PREPARATION

Concrete surfaces should be prepared by vacuum shot-blasting or mechanical abrasion as required to achieve a surface texture which will function as a mechanical key to maximise adhesion of the resin system.

Thoroughly vacuum the surface and any joints to remove all loose dust and debris. Ensure that all preparation is carried out to the edges of slabs, walls etc. to ensure full bonding of the system to a sound surface. Any debris should be recovered from the floor surface and joints etc.

Significant mechanical damage, pitting and cracks may need to be addressed and repaired prior to the application of the primer; these should be identified by survey.

For recommendations, consult Sherwin-Williams Technical Service Department.

TEMPERATURE

Throughout the application process, substrate temperature ideally should be 10ºC–25ºC and a relative humidity <90% ERH, with a minimum air temperature of 15ºC and no condensation. Do not pre-warm this product as working times will be substantially reduced if materials are warm. Substrate temperature must be at least 3ºC above the dew point. The material should not be applied in direct sunlight, if possible.

APPLICATION GUIDANCE

SYSTEM INSTALLATION – IMPORTANT: IT IS CRITICAL TO ADHERE TO THE MIXING INSTRUCTIONS FOR FULL SYSTEM CURE AND PERFORMANCE

PRIMER

RESUFLOR WB CLEAR

1. Mix Resuflor WB Clear Part A (base) with Resuflor WB Clear Part B (hardener) to a uniform consistency. If a separate mixing bucket is being used mix thoroughly ensuring all contents of both components are removed from the buckets supplied.
2. Mix using a low speed mixer and paddle (300–400 rpm) for 2–3 minutes, until a uniform mixed product is obtained.
3. The mixed unit should be applied immediately by roller, brush and/or squeegee with a consistent procedure at a rate of 0.14 kg/m^2, with no puddles. Floor areas should be cross-rolled to ensure even application and to minimise roller marks.
4. Allow to cure for a minimum 8 hours at 20ºC.

EARTHING TAPE

COPPER TAPE

1. No additional earthing is required if the substrate is in intimate contact with the ground. On raised and insulated floors additional earthing from a grid network of copper tape is required.
2. The copper tapes should be applied to the prepared floor prior to application of the Resuprime ESD. The copper tape must be connected to an external earthing point after the floor installation has been completed.
3. Where copper tapes are applied, it is recommended the grid be set no larger than 2m x 2m squares and that the continuity of the grid and earthing be confirmed after the application of Resuprime ESD and before any further coatings are applied.

ESD PRIMER

RESUPRIME ESD

1. Pre mix Resuprime ESD Base ensuring any settled pigment is recovered, then add Resuprime ST Hardener and mix to an even consistency. If a separate mixing bucket is being used mix thoroughly ensuring all contents of both components are removed from the buckets supplied.
2. Mix using a low speed mixer and paddle (300–400 rpm) for 2–3 minutes, until a uniform mixed product is obtained.
3. The mixed unit should be applied immediately by roller, brush and/or squeegee with a consistent procedure at a rate of 0.23 kg/m^2, with no puddles. Floor areas should be cross-rolled to ensure even application and to minimise roller marks.
4. Allow to cure for a minimum 8 hours at 20ºC.

SCREED

RESUFLOR SL ESD

1. Pre mix Resuflor ESD Colour Base ensuring any settled pigment is recovered, then add Resuflor ESD Hardener and mix to an even consistency for one to two minutes. Using a rotary drum mixer or similar forced action mixer bowl add the Resuflor ESD Aggregate steadily and mix thoroughly for a maximum 2–3 minutes to ensure a lump free homogeneous compound.
2. Apply to pre-primed areas as soon after mixing as possible, (delay can result in variation in surface finish, colour and add to application problems).
3. When thoroughly mixed units should be poured evenly over the appropriate area to be covered (monitoring the rate of coverage to ensure correct depth of the screed). Work out the mix rapidly and evenly over the area with a notched trowel, pin rake or similar to the appropriate thickness. Low temperatures and reduced thickness may reduce the flow properties of these products. Applied at 3 mm thickness 6 kg covers 1 m^2 on a good surface.
4. Roll the area with a spiked roller within 10 - 15 minutes to achieve an even smooth surface and to remove any trapped air.
5. Units should be applied consistently with mixes from the same batch used consecutively where adjacent areas are being laid.
6. Resuflor ESD should be allowed to cure and will be suitable for light traffic after 24 hours at 20ºC.

JOINTS

1. Any functioning joints in the subfloor should be continued through the resin flooring system and filled with Epo-Flex VJ. The spacing and type of joints should be determined prior to the resin floor system being installed.
2. Mix Epo-Flex VJ Part A (base) with Epo-Flex VJ Part B (hardener). These units are in preweighed containers.
3. Mix using a low speed mixer and paddle (300–400 rpm) for 2–3 minutes, until a uniform mixed product is obtained.
4. Apply the Epo-Flex VJ immediately to the prepared and cut joints with a knife to a consistent smooth finish.

COVING

1. If coved skirtings are required please see the Resuflor Screed System Sheet or consult Sherwin-Williams Technical Service Department.

NB: Cure times are extended at low temperatures.

RESUFLOR TOPFLOOR ESD

FINISHED WORKING SYSTEM, MANUFACTURING FACILITY.

CLEAN UP

Cleaning up mixing and application equipment immediately after use. For details see the Product data Sheet.

SAFETY

Refer to the SDS sheet before use. All applicable laws and particular plant safety guidelines must be followed during the handling and installation and cure of these materials.

Safe and proper disposal of excess materials shall be done in accordance with regional legislation.

MATERIAL STORAGE

Store materials in a temperature controlled environment (10ºC–30ºC) and out of direct sunlight.

Keep resins, hardeners, and solvents separated from each other and away from sources of ignition.

MAINTENANCE AND CLEANING

Sherwin-Williams recommends a floor cleaning regime is used for maximum performance and aesthetics of the resin floor, using adequate cleaners.

Where required floor scrubbers, rotary washers or power washing can be operated.

All surfaces should be thoroughly rinsed with clean water after the use of cleaners.

If more information is requested contact your local Sherwin-Williams representative.

Please refer to the Sherwin-Williams Guide for cleaning resin floors for advice.

DISCLAIMER

The information and recommendations set forth in this document are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product(s) offered at the time of publication. Published technical data and instructions are subject to change without notice.

Consult technicale@sherwin.com to obtain the most recent product data information and application instructions.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. No warranty or guarantee of any kind is made by Sherwin-Williams, expressed or implied, statutory, by operation of law or otherwise including merchantability and fitness for a particular purpose.

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