

Conductive epoxy flooring system

Product Description

TAL ANTISTATIC SLE is a three layer system comprising an epoxy primer, a water dispersed epoxy base coat and a self smoothing epoxy top coat that produces a conductive or dissipative floor. The conductive grade (CG) provides a floor with a point to point resistance and a resistance to ground of between 5×10^4 to 1×10^6 Ohms. The dissipative grade (DG) provides a floor with a point to point resistance and a resistance to ground of between 5×10^6 to 1×10^9 Ohms.

Advantages

- Meets SCAQMD Rule 1113 & LEED VOC Limits
- Fast application
- Easy to clean finish
- Resistant to wide range of chemicals
- High impact and abrasion resistance

Typical Uses

- Electronic manufacturing and assembly plants
- Hospitals
- Clean rooms
- Chemical handling and processing areas

Property	Typical Results
Compressive strength	>60MPa (8700psi)
Flexural Strength	>30MPa (4350psi)
Tensile Strength	>20MPa (2900psi)
Bond Strength*	>5MPa (725psi)

Laboratory Test Data

Above results were obtained after 7 days cure.

*Depends on substrate quality

Application Properties

Application thickness	1.5mm to 2mm
Application temperature range	10 to 35°C (50 to 95°F)
Pot life at 25C (77F)	
TAL SF PRIMER	45 mins
TAL MT PRIMER	120 mins
TAL ANTISTATIC SLE Base Coat	90 mins
TAL ANTISTATIC SLE Top Coat	45 mins

Volatile Organic Content

TAL SF PRIMER = 0 g/L

Base Coat = <20 g/L

TAL MT PRIMER = 145 g/L

Top Coat = <50 g/L

Specification Compliance

SCAQMD Rule 1113*

ASTM F150

LEED NC2009 IEQ 4.2*

BS 2050

IEC/BS EN 61340

BS 5958

ANSI/ESD S7.1

DoA 385-64

EFNARC Type 5A & B

FeFRA Type 5 MD/HD

* when used with TAL SF PRIMER

Chemical Resistance

TAL ANTISTATIC SLE has good resistance to the following:

10% Lactic acid

Petrol and oils

Concentrated bleach

Greases

Saturated sugar solution

10% Ammonia

Saturated urea solution

Contact TAL for details of resistance to specific chemicals

Colours

RAL 7035 Light grey

RAL 1017 Saffron Yellow

RAL 7042 Traffic Grey A

RAL 6017 May Green

RAL 7043 Traffic Grey B

RAL 3002 Carmine Red

RAL 7001 Silver Grey

RAL 5017 Traffic Blue

Theoretical Coverage

TAL SF PRIMER: 10m² per liter at 100 microns wft.

TAL MT PRIMER: 5m² per liter at 200 microns wft.

TAL ANTISTATIC SLE Base Coat: 6.6m² per liter at 150 microns wft.

TAL ANTISTATIC SLE Top Coat: 1.5L per m² at 1.5mm.

Packaging

TAL SF & MT Primer: 5 & 15L packs.

TAL ANTISTATIC SLE Base Coat: 4.5 and 18L packs

TAL ANTISTATIC SLE Top Coat: 17L packs.

Shelf Life

18 months when stored at 35°C or less in a frost-free, dry and shaded area.

Installation Guidelines

Epoxy flooring should only be carried out by experienced contractors. TAL provides detailed method statements on all its products for use in various applications. These must be referred to prior to starting work and includes requirements for testing of electrical resistance, earthing of the system and how to deal with day and live joints. The information below is a summary intended for guidance only.

Surface Preparation

The substrate must be structurally sound. Loose or unsound concrete should be removed and made good. Surfaces must be entirely free of oil, grease, paint, corrosion deposits, dust, laitance or other surface deposits. The surface should be prepared by captive blasting to produce a lightly exposed aggregate surface i.e. a ICRI CSP 4 or 5 surface profile. Any bug holes (blow holes) should be filled with TAL BUGFILL or TAL PRIMER FILLER (when using TAL MT PRIMER apply TAL BUGFILL or Primer Filler after priming). If substrate is not level or is uneven, level using TAL LEVELCEM HD.

Moisture Testing

The concrete slab should be tested for moisture with the Rapid RH system following the procedure in ASTM F2170. If the humidity reading is greater than 80% then conduct moisture vapor emission rate (MVER) testing using the procedure in ASTM F1869. (Both test kits are available for purchase from TAL). If the MVER is under 3lbs/1000ft²/24h use TAL SF PRIMER. If the MVER is 3 to 5lbs/1000ft²/24h use a single coat TAL MT PRIMER at 165 microns wft. If the MVER is 5 to 12 lbs/1000ft²/24h use two coats of TAL MT PRIMER at 200 microns wft per coat.

Priming

The base and hardener have to mixed using a slow speed drill and approved mixing paddle until homogenous. The mixed primer should then be applied to the prepared substrate with a stiff brush or roller. Do not over apply or allow puddles of primer to form. If the primer is absorbed into the surface easily, it will be necessary to apply a second coat once the initial coat is tack-free. Allow the primer to become tack-free before application of the Base Coat. Apply Base Coat within 24 hours of priming.

Mixing and Application of the Undercoat

Both of the liquid components should be briefly stirred to ensure that any settlement products are fully suspended. Pour the base component into the hardener component and mix using a slow speed drill and approved mixing paddle for 2 minutes. When mixed the Base Coat should be applied to the primed concrete using a medium hair roller. Do not pour directly onto the substrate as this may result in occasional patches of thick material.

Mixing and Application of the Topcoat

Both of the liquid components should be briefly stirred to ensure that any settlement products are fully suspended. Mixing should be carried out using a forced action mixer such as a Mixit 25 (mixers are available to purchase or rent from TAL). Mix the base and hardener until a uniform color is achieved. Add the filler slowly during mixing and mix for a further 2 mins. Spread the mixed product onto the tack-free primer, using a 4mm notched vee rake followed by a pin leveller set at 1.5 to 2mm to achieve a uniform thickness of between 1.5 and 2mm. Immediately after spreading, roll using a spiked roller to release trapped air and remove trowel marks. Rolling should be completed within 20 minutes.

Cleaning

Tools should be cleaned immediately after use and before the resin sets, using a proprietary cleaner. Once the resin has set, it can only be removed by mechanical means.

Limitations

May change color when exposed to direct sunlight.
Do not use solvent to finish the surface.
Do not be apply within 3°C of the dewpoint or if it is within 5°C of the dewpoint and dropping.
Avoid skin contact.
Do not apply below 10°C.
Do not apply at thicknesses greater than those mentioned.
Maximum ambient relative humidity of 85%.
Do not expose the surface to water or cleaning solutions until fully cured.
If any dust is present during application "fish eyes" may occur.

