

Talrakflortop® ESD - PU System

Epoxy resin and PU based hybrid static Conductive/Dissipative system for anti-static floor treatment



The Construction Alchemists

Talrakflortop® ESD - PU System has a surface resistance of 5×10^4 to 1×10^9 Ohms

Description

Talrakflortop® ESD - PU System consists of the following :

1. Epoxy based Talrak Epoxy Primer
2. Talrak Epoxy Screed - 2000microns
3. Conductive Grid of 12mm wide copper tape
4. Talrak ESD undercoat
5. Talrak ESD self levelling 1mm thick
6. Talrakflortop ESD PU finish - 3mm

Features & Benefits

- Dissipates static charges to the earth
- Provides hardwearing seamless anti-static floor.
- Abrasion resistance for floors subjected to medium to heavy duty foot, trolley, pallet trucks and rubber wheeled fork lifts.
- Easy cleanable floor surfaces.
- Available in a select range of colours.
- Chemical resistant

Primary Application

Talrakflortop® ESD - PU system enables dissipation of static charges and also provides anti-static charge generation surface. The system can be used Assembly floors of electrical control systems, Automobiles, Hospitals, Electronics Assembly, and Paint shop, panel room, server room etc..

Technical properties

Mixed Density (kg/ltr)	1.5 - 1.7
VoC	nil
Surface resistance	5×10^4 to 1×10^9 Ohms
Compressive strength	60MPa
Tensile strength	20MPa
Flexural strength	40MPa
Pot life @ 30°C	~30 minutes
Curing time @ 30°C	Light traffic - 16 hrs Foot traffic - 36 hrs Full cure - 7 days

Specification clause

The Talrakflortop ESD - PU System shall have a surface resistance of 5×10^4 to 1×10^9 Ohms of cured topping with seamless surface. It shall have an epoxy based primer, an under coat and PU finish top. The installation of the system shall also comprise of introduction of a conductive copper tape directly on the primer installed such that it projects at least 1m from the perimeter of the treated floor into the Talrakflortop ESD - PU System. The spacing of the strips shall be at least 3m apart and shall be passing over expansion joints or any other floor discontinuities. The conductive tape shall be secured to a building earthing point.

Chemical Resistance

The cured Talrakflortop® ESD - PU System is resistant to hydro carbons, lubricant oils, fatty acids, and floor cleaning detergents and alkalis.

Application Instructions

Pre Condition of Floors

The new concrete floors shall be at least 28days cured and shall have a moisture content of less than 5% or a RH of 75%. The under neath of the floor should be provided with a moisture barrier.

The old concrete floors shall be free from bond breaking contaminants.

The concrete substrate should be a minimum of 25MPa concrete.

Surface Preparation

The new and cured concrete surface shall be cleaned thoroughly by grinding to remove laitance, curing compounds or any other bond breaking agents that might be present on the surface.

The existing old floors shall be cleaned to remove all the oil penetrations if any, chemical spillages, dust, loose particles etc, to expose sound and strong concrete surface. Surface buffing and vacuum cleaning may be employed.

It is recommended to check the substrate strength by Schmidt Hammer Test.

If any precoated surfaces exist, the coating shall be removed by mechanical scarifying or scabbling.

Any undulated surfaces shall be evened out using Talrakresimix EP - Epoxy mortar to line and level.

Priming

The prepared floor should be primed using Talrakflortop ESD Primer. Mix full packs of hardener and base components thoroughly for 3 mins. Until a homogeneous mix is obtained, using a slow speed drill (400 - 500 rpm) fitted with a suitable mixing paddle. Avoid part mixing.

The mixed primer shall be applied using a stiff brush or roller soon after mixing into a uniform and continuous film on the surface ensuring penetration of primer into the substrate. Inadequate brushing is indicated by dry patches. Re-application of primer over these patches shall be carried out.

Screed

Application Instruction:

Stir the component A and component B respectively. If settling observed in the component A, loosen the settled material and mix it with the help of pneumatic stirrer. Mix component C gradually in the component A in the specified ratio under continuous stirring till homogeneous then Add component B. Do not part mix or vary mixing ratio.

Earthing Connections

A network of 12mm wide conductive copper strip tape shall be installed directly over the cured primer. The length of the conductive tape shall be adjusted such that it projects maximum of 1m from the periphery of the application. Further strips of tape shall be applied within the floor area at every 3m. Attention should be paid to the areas across expansion joints or any other discontinuities on the floor to ensure permanent electrical continuity. The applied tape should be firmly secured to confirmed earth point.

Under Coat

Mixing undercoat

Mix the entire contents of base and hardener of the under coat using a slow speed paddle mixer (500rpm) until a homogeneous mix is obtained. Thinners / Solvent should never be added.

Applying undercoat

Apply the mixed under coat to the primed floor using a brush or roller at an application rate of 5.5 - 6.5 m²/ltr depending on the surface characteristics of the substrate.

The excess application that may form puddling should be avoided.

The undercoat provides ESD property to the treated floor through dissipating static electric charges to the earth. The application procedure and coverage rates are critical to achieve the targeted electrical properties of the completed floor.

The conductivity of the undercoat should be measured before applying the Top coat. The surface resistance should be between 3x10³ and 8x10⁴ Ohm.

Top Coat - Self Leveling

Mixing topcoat

Firstly, mix the entire contents of hardener to the base component and mix using a slow speed paddle mixer. Next add the colour component and mix the contents until a uniform mix is obtained. Add the aggregates to the above mix and mix for at least 3 - 5 minutes to obtain a homogeneous mix. Thinners / Solvent should never be added.

Applying topcoat

Pour the mixed material immediately after mixing. Spread the material at 1mm thick with the help of a steel trowel or a float. Immediately after application the surface should be firmly rolled in perpendicular directions with a nylon spiked roller to help release any entrapped air in the material and help level any slight trowel marks.

None of the components of Talrakflortop® ESD - PU System should be applied on asphalt, PVC tiles or vinyl flooring sheets.

Talrakflortop® ESD - PU System should not be applied at temperatures 15°C and falling.

Talrakflortop ESD - PU Finish

Application Instruction:

Stir comp A and comp B separately. If settling is observed in component A, loosen the settled material and mix it with the help of a pneumatic stirrer. Mix component A with comp B in the specified ratio under continuous stirring till homogeneous. Add thinner as required. Filter through 80 mesh before application.

Maintenance

The treated floor with Talrakflortop ESD - PU System shall be regularly cleaned using a single or double headed rotary scrubber dryer in conjunction with a mild detergent. Ensure that floor is not abraded during cleaning and the curing agent is completely removed. To remove dry dust vacuum cleaners may be used.

Estimating

Packaging

Talrak Epoxy Primer	4ltr packs
Talrak Epoxy Screed	20/30 Kg
Talrakflortop ESD - Under Coat	4ltr
Talrakflortop ESD self levelling	15ltr combo
Talrakflortop ESD - PU finish	20ltr

Coverage

Talrak Epoxy Primer	5 - 6 m ² /coat/ltr
Talrak Epoxy Screed	3.2 Kg/m ² @2mm thick
Talrakflortop ESD - Under Coat	5.5 - 6.5 m ² / coat/ltr
Talrakflortop® ESD self levelling	15 m ² /15ltr pack @1mm thick
Talrakflortop ESD - PU finish	3ltr/sq.m @3mm thick

Theoretical Coverage

Actual coverage depends on surface condition at site.

Storage

All the above products have a shelf life of 12 months if kept in dry store in original, unopened containers. If stored at high temperature and/or high humidity conditions the shelf life may be reduced.

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Precautions

Health & Safety instructions

Some people are sensitive to epoxy resin systems. Rubber gloves and/or barrier creams, protective clothing, goggles and respirator shall be worn while handling the materials. Sufficient mechanical and/or local exhaust ventilation shall be provided to maintain easy working conditions. If contact with skin or eyes occurs, washing with plenty of water is suggested. SOLVENT SHALL NOT BE USED. If irritation persists, seek immediate medical advice shall be sought. Smoking and naked flame should be avoided while using the materials

Talrak



Talrak Construction Chemicals Pvt. Ltd.

An ISO 9001:2015 Certified Company

Works:

Plot No. 115-A, 1st Phase. Harohalli Industrial Area,
Kanakapura Taluka - 562 112. Ramanagar Dist.

www.talrak.in

Important note :

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Ref : TCC/TDS/IFI2 - R0