



Expanfloor* Conductive*

Epoxy resin static conductive floor with resistance between 5×10^4 and 1×10^6 ohms

Uses

Expanfloor* Conductive is suitable for use in areas where a static conductive floor with a resistance between 5×10^4 and 1×10^6 ohms is required as a measure to control static electricity, such as:

- Electronic manufacture and assembly
- hospital operation theatre
- hazardous dust and chemical environments
- clean rooms etc.

Advantages

- Static control - provides static electricity with an effective passage to earth.
- Seamless - smooth, hygienic surface which is easily cleaned, unlike vinyl tiles which are not seamless.
- Durable - long term performance, accepts fork lift traffic, more durable than vinyl tiles.
- Attractive - wide range of colours enhances working environment.
- Resists most chemical spillage.

Description

Expanfloor* Conductive is a 2mm thick epoxy resin floor topping with controlled conductive properties.

The system comprises an epoxy primer, conductive epoxy undercoat and a 2mm thick epoxy top coat. It is available in a wide range of attractive colours and provides a highly durable, chemically resistant seamless floor.

Technical support

Expanchem Fospak offers a comprehensive technical support service to specifiers, end users and contractors. It is also able to offer on-site technical assistance, an AutoCAD facility and dedicated specification assistance in locations all over the world.

Specification

The designated floor areas shall be surfaced with Expanfloor* Conductive, a 2mm thick flow-applied epoxy resin floor topping. The topping shall provide a surface and bulk resistance between 5×10^4 and 1×10^6 ohms when tested to DIN 51953 and ASTM F150-78 respectively.

Properties

The test results below were determined on laboratory specimens and may vary from those obtained under site conditions.

Electrical Properties

Surface resistance (ASTM F150-78) : 5×10^4 to 1×10^6 ohms

Bulk resistance (DIN 51953) : 5×10^4 to 1×10^6 ohms
(ASTM F150-78) : 5×10^4 to 1×10^6 ohms

Charge decay (Fed. Spec. 101C Method 4046) : 5000v to zero in less than 0.1 seconds

Body voltage decay (Stephen Halperin & Associate Ltd.) : 5000v to zero in 0.4 seconds using conductive heel straps or shoes.

Physical properties

Compressive strength (BS6319) : 60 N/mm²

Flexural strength (BS6319) : 40 N/mm²

Tensile strength (BS6319) : 18 N/mm²

Abrasion resistance Fed. Spec. 141A (CS17 wheel,1000g,1000cycles) : 97mg weight loss 0.03mm depth of water

Impact resistance (BS8204 Pt.1) : 0.2mm indentation

Cure time	20°C	35°C
Foot traffic	24 hours	18 hours
Vehicular traffic	48 hours	36 hours

Chemical properties

Expanfloor* Conductive provides excellent resistance to a wide range of industrial chemicals.

Design Criteria

Expanfloor* Conductive is designed for application at a nominal thickness of 2mm. It should be installed where a static conductive floor with resistance between 5×10^4 and 1×10^6 ohms is required.

Expanfloor* Conductive is designed to dissipate static electricity away from the source to earth.



CONSTRUCTION CHEMISTRY

Substrates should be dry and not suffer, or be likely to suffer, from rising damp. If necessary, suitable damp-proof membranes should be installed to prevent this. Substrates should not have a relative humidity greater than 75% at the time of installation.

Instructions for use

Expanfloor* Conductive should be installed by specialist applicators who must follow the procedures laid down in the Method Statement. Please contact your local Expanchem Fospak representative to obtain the Method Statement for correct application of Expanfloor* Conductive.

Limitations

- Application should not commence if the temperature of the substrate is below 10°C.
- Expanfloor* Conductive should not be used on floors known to suffer from rising damp or have a relative humidity greater than 75% when measured in accordance with BS 8203:87, appendix A or by a Vaisala thermo hygrometer type 131.
- Ensure adequate cover is taken to avoid exposing the material to a "wind tunnel" effect.
- Expanfloor* Conductive should not be applied to asphalt, unmodified sand/cement screeds, PVC tiles or vinyl.

Estimating

Supply

Expanfloor* Conductive : 30 kg bags

Expanfloor* Conductive U/C : 5 kg bags

Expanprime* 31 : 1 & 4 lt can

Expanchem Solvent 102 : 5 litre pails

Coverage/Yield

Expanfloor* Conductive : 10m² / 30 kg bag

Expanfloor* Conductive U/C : 35m²/5kg pack

Expanprime* 31 : 4-5m²/litre

Storage

All products above have a shelf life of 12 months if kept in a dry store in their original unopened packages.

Store in cool, dry conditions in original unopened packs. If stored at high temperature and/or high humidity conditions, the shelf life will be reduced.

Precautions

Health and safety

Expanfloor* Conductive, Expanfloor* Conductive undercoat, Expanprime* 31 and Expanchem Solvent 102 should not come in contact with skin and eyes, or be swallowed. Ensure adequate ventilation and avoid inhalation of vapors. Some people are sensitive to resins, hardeners and solvents. Wear suitable protective clothing, gloves and eye protection. If working in confined areas, suitable respiratory protective equipment must be used. The use of a barrier cream provide additional skin protection. In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed seek medical attention immediately

- Do not induce vomiting.

Fire

Expanfloor* Conductive base component, Expanfloor* Conductive undercoat and Expanprime* 31 are non-flammable.

Expanprime* Conductive Hardener component, and Expanchem Solvent 102 are flammable.

Flash points

Expanfloor* Conductive hardener : 39°C

Expanchem Solvent 102 : 33°C



CONSTRUCTION CHEMISTRY

*Denotes the trademark registered.

REGIONAL SALES OFFICES IN PAKISTAN:

Fospak (Pvt) Ltd.

Head Office

702, Business Avenue,
Block-6, PECHS., Shakra-e-Faisal,
Karachi, Pakistan.

Tel # +92-21-34528477, 34529859

Fax # +92-21-34522436

Email : info.khi@fospak.com.pk

Lahore Sales Office

2nd Floor Sarwar Shaheed Plaza,
Cavalry Ground,
Main Boulevard, Lahore Cantt,
Lahore, Pakistan.

Tel # +92-42-36675773

Fax # +92-42-36675838

Email : info.lhr@fospak.com.pk

Rawalpindi Sales Office

1st Floor,
Al-Harman Plaza,
Main Murree Road,
Rawalpindi, Pakistan.

Tel # +92-51-9290592

Fax # +92-51-9290590

Email : info.isb@fospak.com.pk

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