Temafloor 4000 ESD

DESCRIPTION

A solvent-free Temafloor 4000 ESD troweling screed is prepared by adding conductive sand mixture to Temafloor 401 epoxy varnish mixture.

PRODUCT FEATURES AND RECOMMENDED USES

- Dissipates static to increase safety and to prevent damage to expensive equipment. Forms electrically electrostatic dissipative coating when used with Temafloor 310 ESD Primer
- Provides seamless static dissipative surface throughout the space
- Withstands heavy foot and rolling load traffic. Good resistance to impact, chemicals and heavy wear. Resistance to chemicals is given case by case
- Provides even wear and a consistent appearance
- Prevents electrostatic discharge damages and recommended in places where electric discharge is not desirable e.g. in electronic industry, production and storing of explosive materials, place with higher risks of ignition
- Meets the requirements for electrostatic dissipative floor coatings according to EN 61340-5-1 (see page 3)
- Withstands +110ºC dry heat and +60ºC in immersion
- Computer rooms, data warehousing, electronic testing labs, electronics manufacturing and hyperbaric spaces in healthcare premises

TECHNICAL DATA

Volume solids

approx. 100%.

Specific gravity

1.8–2.0kg / l (mixture), depending on the grain size and the amount of sand.
Recommended grain size 0.5–1.2mm.

Mixing ratio

Temafloor 401 mixture	Temafloor 4012 parts by volume
	Temafloor 401 hardener1 part by volume

Screed film thickness 3–4mm	1 part by volume Temafloor 401 mixture
	4 parts by volume (6 parts by weight) of conductive sand mixture: • 30% conductive sand • 70% coloured sand

Pot life (+23°C)

20–30 minutes on substrate, 10–15 minutes in the mixing container.

Practical coverage

For a flat substrate:
3mm layer: 3 litres ready for use screed / m²
4mm layer: 4 litres ready for use screed / m²
Practical coverage depends on the evenness of the substrate.

Drying time (+23°C)

Dust dry after 6 hours
Light trucking after 24 hours
Recoatable 16–24 hours
Fully cured after 7 days

At lower temperature the curing process will last longer.

Cleaning of equipment

Thinner 006 1029.

Finish

High gloss. Sunlight will affect on the shade and the gloss of the varnish in the long run.

Colors

The colour of the screed is determined by the sand used

Thinning instructions

Do not thin Temafloor 4000 ESD grinding screed.

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VOC	VOC 2004/42/EC (cat A/j) 500 g/l (2010) Temafloor 4000 ESD: max. VOC < 500 g/l

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APPLICATION INSTRUCTIONS

Surface preparation

Always remove all grease, oil, and other impurities with Maalipesu detergent before grinding. Remove laitance or old peeling paint layers by power grinding, milling, or vacuum grit blasting. Choose the method best suited for the premises. Clean out pot holes removing all loose or brittle material. Open cracks with e.g. an abrasive tool. After mechanical pre-treatment remove all loose material and dust carefully with a vacuum cleaner.
The substrate must have a tensile strength above 1.5 MPa. For application on cementitious leveling screed: check compatibility with the leveling screed manufacturer.

Application conditions

The relative humidity of the concrete should not exceed 97%. Residual moisture content should be below 4 weight-%. The temperature of the
ambient air, surface or coating should not fall below +15ºC during application or drying. Relative humidity of air should not exceed 80%.

Mixing components

First stir base and hardener separately. Mix the correct proportions of base and hardener thoroughly (approx. 2 minutes to get homogenous mixture) by using a low speed industrial hand drill with a paddle. Insufficient mixing or incorrect mixing ratio will result in uneven drying of the surface, weaken the properties of the coating and risk the success of the application.

Application

By adjustable trowel, serrated trowel, float, levelling trowel and screed box.

Priming

Prime using 20–30% thinned Temafloor 310 ESD Primer. See more detailed information from the product data sheet of Temafloor 310 ESD Primer. Scatter conductive sand on the fresh primer coat to ensure the screed adhesion and prevent gliding of the screed.

Screed

Pour the screed mixture onto the floor. If a thin layer is required, apply by an adjustable trowel to the desired screed thickness. Thick layers are applied by a screed box or by a straight-edge and suitable laths to gauge the required thickness. Trowel the screeded surface by hands or use a suitable lightweight troweling machine.

Topcoating

Overcoating should be done within 16–24 hrs after priming using Temafloor 401 epoxy varnish thinned 20–30% with Thinner 1029. If the primed surface is not overcoated within 24 hrs, it should be abraded. Pour the mixture onto the floor and apply it with a trowel and level with a roller.

EN 61340-5-1

When the system is applied according to this product datasheet, the Temafloor 4000 ESD system fulfils the requirements of standard EN 61340-5-1, having a resistance to ground R_g <10^9 Ω (<10^8 Ω for newly installed floor) and R_g>50 kΩ. Measured resistance values may vary but are typically 1 MΩ < R_g < 50 MΩ.

HEALTH AND SAFETY

Containers are provided with safety labels, which should be observed. Further information about hazardous influences and protection are detailed in individual health and safety data sheets.
A health and safety data sheet is available on request from Tikkurila Oyj.

For industrial and professional use only.

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EN 13813

The European harmonized productstandard EN 13813:2002 defines the requirements for Screed materials and floor screeds, including synthetic resin screeds.

This product is tested and CE-labelled in accordance with the tables ZA.1.5 and ZA.3.3 in the appendix ZA.3.

CE	
Tikkurila Oyj Kuninkaalantie 1 FI-01300 VANTAA	
11	
TIK-8400-5013b	
EN 13813 SR-RWA10-B2,0-IR 4	
Synthetic resin screed.	
Impact resistance	IR4
Capillary absorption and permeability to water	w < 0,1 kg/m² · $h^{0,5}$
Chemical resistance	CR 1, 2, 4, 4a, 6, 6b, 7, 7a, 11, 12, 14 (Class 2)
Release of corrosive substances	SR
Abrasion resistance	RWA 10
Thermal resistance	NPD
Reaction to fire	D_{fl}-s1
Adhesion strength by pull off test	B 2.0
Release of dangerous substances	NPD
Sound absorption	NPD
Sound insulation	NPD

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EN 1504-2:2004

The European harmonized productstandard EN 1504-2:2004 defines the requirements for surface protection systems for concrete.

This product is tested and CE-labelled in accordance with the tables 1d, 1f and 1g in the appendix ZA.

CE	
0809	
Tikkurila Oyj Kuninkaalantie 1 FI-01300 VANTAA	
13	
0809-CPD-0773	
TIK-8400-5013a	
EN 1504-2:2004	
Product for protection and repair of concrete structures – Coating.	
Antistatic behavior	Class II
Permeability to CO2	s_D > 50 m
Impact resistance	Class I: ≥ 4 Nm
Capillary absorption and permeability to water	w < 0,1 kg/m² · $h^{0,5}$
Abrasion resistance	< 3000 mg
Reaction to fire	D_{fl}-s1
Adhesion strength by pull off test	≥ 2,0 N/mm²
Release of dangerous substances	NPD
Permeability to water vapour	Class I, sD < 50 m
Resistance to severe chemical attack	Class II