

# Temaflor 4000 ESD

## DESCRIPTION

A solvent-free Temaflor 4000 ESD troweling screed is prepared by adding conductive sand mixture to Temaflor 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 Temaflor 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 +110°C dry heat and +60°C 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

Temaflor 401 mixture	Temaflor 4012 parts by volume
	Temaflor 401 hardener1 part by volume
Screed film thickness 3–4mm	1 part by volume Temaflor 401 mixture
	4 parts by volume (6 parts by weight) of conductive sand mixture: <ul style="list-style-type: none"> <li>• 30% conductive sand</li> <li>• 70% coloured sand</li> </ul>

### 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 / m<sup>2</sup>  
4mm layer: 4 litres ready for use screed / m<sup>2</sup>  
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 Temaflor 4000 ESD grinding screed.



## Temafloor 4000 ESD

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

<b>Surface preparation</b>	<p>New concrete: Remove laitance by power grinding, vacuum grit blasting or hydrochloric acid etching. Choose the method best suited for the premises. After grinding remove dust carefully with a vacuum cleaner. Hydrochloric acid etching is carried out with diluted hydrochloric acid (1 part concentrated hydrochloric acid, 4 parts water). Rinse with plenty of water. Dry the floor.</p> <p>Old concrete: Remove all grease, oil, chemicals and other impurities by Maalipesu detergent. Remove old peeling paint layer by grinding, milling or vacuum grit blasting. Choose the method best suited for the premises. Clean out pot-holes removing all loose friable material. Open cracks with e.g. an abrasive tool. Remove loose material and dust.</p>
<b>Application conditions</b>	<p>The relative humidity of the concrete should not exceed 97%. The temperature of the ambient air, surface or coating should not fall below +15°C during application or drying. Relative humidity of air should not exceed 80%.</p> <p>Note! There is a natural tendency of this coating to chalk, discolor or yellow unevenly. It is recommended to use polyurethane topcoat when there are high aesthetical requirements on color appearance.</p>
<b>Mixing components</b>	<p>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.</p>
<b>Application</b>	<p>By adjustable trowel, serrated trowel, float, levelling trowel and screed box.</p>
<b>Priming</b>	<p>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.</p>
<b>Screed</b>	<p>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.</p>
<b>Topcoating</b>	<p>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.</p>
<b>EN 61340-5-1</b>	<p>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 <math>R_g &lt; 10^9 \Omega</math> (<math>&lt; 10^8 \Omega</math> for newly installed floor) and <math>R_g &gt; 50 \text{ k}\Omega</math>. Measured resistance values may vary but are typically <math>1 \text{ M}\Omega &lt; R_g &lt; 50 \text{ M}\Omega</math>.</p>

## 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.**



## Temafloor 4000 ESD

The above information is not intended to be exhaustive or complete. The information is based on laboratory tests and practical experience, and it is given to the best of our knowledge. The quality of the product is ensured by our operational system, based on the requirements of ISO 9001 and ISO 14001. As manufacturer we cannot control the conditions under which the product is being used or the many factors that have an effect on the use and application of the product. We disclaim liability for any damages caused by using the product against our instructions or for inappropriate purposes. We reserve the right to change the given information unilaterally without notice.

The product is intended for professional use only and shall only be used by professionals who have sufficient knowledge and expertise on the proper use of the product. The information above is advisory only. To the extent permitted by applicable law, we shall not approve of any liability for the conditions under which the product is being used or for the use or application of the product.

In case you intend to use the product for any other purpose than that recommended in this document without first getting our written confirmation on the suitability for the intended use, such use takes place at your own risk.

# Temafloor 4000 ESD

## EN 13813

The European harmonized product standard 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	$w < 0,1 \text{ kg/m}^2 \cdot h^{0,5}$
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 <sub>f</sub> -s1
Adhesion strength by pull off test	B 2.0
Release of dangerous substances	NPD
Sound absorption	NPD
Sound insulation	NPD

# Temafloor 4000 ESD

## EN 1504-2:2004

The European harmonized product standard 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 CO <sub>2</sub>	sD > 50 m
Impact resistance	Class I: ≥ 4 Nm
Capillary absorption and permeability to water	w < 0,1 kg/m <sup>2</sup> · h <sup>0,5</sup>
Abrasion resistance	< 3000 mg
Reaction to fire	D <sub>f</sub> -s1
Adhesion strength by pull off test	≥ 2,0 N/mm <sup>2</sup>
Release of dangerous substances	NPD
Permeability to water vapour	Class I, sD < 50 m
Resistance to severe chemical attack	Class II