

## ROMPOX® 1104 ESD conductive paint

**Solvent free, pigmented, electrostatic volume conductive,  
2 component epoxy/amine resin system acc. to DIN EN 61340**

### 1.0 Areas of application

ROMPOX® 1104 ESD coating is an electrically conductive layer for conductivity. It is used in manufacturing areas in the electronics industry, circuit board manufacture, laboratories, operating theatres, computer rooms and in the automotive industry. It is also suitable for use in areas that are at risk of explosion. It has been tested according to ESD norms (DIN EN 61340 part 4-1, 4-5, part 5-1/5-2) and fulfills the requirements for an ESD coating as well as the norm DIN EN 1081.

### 2.0 Technical data of liquid components

#### 2.1 Technical data

System	2 component EP/amine resin system		
Density (AB) at 23° C	1,10	g/cm <sup>3</sup>	DIN EN ISO 2811-1
Viscosity	7500	mPas	DIN 53019
VOC content	<500	g/l (EU Norm, max. 500 g/l)	EU 2004/42/II/A
Waste disposal key comp. A	08 01 11		acc. to AVV
Waste disposal key comp. B	08 01 11		acc. to AVV
Waste disposal key comp. AB	07 02 13	hardened form	acc. to AVV
GISCODE	RE 0		Bau BG

#### 2.2 Delivery form

ROMPOX® 1104 ESD: Two component containers of 10kg and 25kg  
Components A and B are supplied in a ready to use mixed ratio. Delivery in large or small containers on request.

#### 2.3 Storage

In compliance with the regulations and technical rules applying to hazardous substances.  
Storage of unopened containers, in cool, dry, frostfree rooms. Ideal storage temperature is approx. 15°C for unopened containers and storage life is 12 months. Temperatures below +10°C and above +35°C should be avoided. After opening, the containers should be used up as soon as possible. Protect contents against moisture. Before use, the material needs to be brought up to ambient temperature.

### 3.0 Technical data for application

#### 3.1 Surface requirements before application

The surface must be loadbearing, even, dry and free of oil, grease, separators and dust. Loose particles and other dirt must be removed. In general, the surface should be prepared by shotpeening and then primed. In some cases it may be necessary to carry out grinding or milling. The minimum adhesion strength of the surface must be  $\geq 1,5 \text{ N/mm}^2$ . Residual moisture must be  $\leq 4 \text{ CM}\%$  (CM machine). Before coating the concrete surface must be evened out using a primer or scraping filler such as ROMPOX® 1506, in order to achieve an extremely smooth surface. For cement surfaces with increased residual moisture  $\leq 6 \text{ CM}\%$  ROMPOX® 1506 should be used, for higher residual moisture  $>6 \text{ CM}\%$ , ROMPOX® 1504. Highly porous surfaces need to be primed twice! In all cases, it is necessary, that after priming, all pores on the surface are sealed. Metal surfaces should be treated according to the Swedish norm SA 2 ½ acc. to ISO Norm 8501-1 and then primed with ROMPOX® 1101. Due to the numerous variations in surfaces – especially with old coatings – we recommend that a sample coating is laid, in order to eliminate any reactions that cannot be calculated in advance.

### 3.2 Technical data for application

Mixing ratio A:B		<b>100 : 25</b>	Weight parts	
Application time at	10° C	<b>60</b>	minutes	ROMEX® - Norm 04
	20° C	<b>30</b>	minutes	ROMEX® - Norm 04
	30° C	<b>15</b>	minutes	ROMEX® - Norm 04
Pot time	23° C	<b>35</b>	minutes	ROMEX® - Norm 04
Min. hardening temperature		<b>+10</b>	°C	Floor and air temperature
Application temperature		<b>15-30</b>	°C	Floor and air temperature
Dewpoint distance		<b>≥3</b>	°C	Floor and air temperature
Air humidity		<b>≤75</b>	%	Relative air humidity

**Please note:** The times mentioned in item 3.2 are approximations and will vary with differing ambient conditions

### 3.3 Application instructions

Component B (hardener) is poured completely into component A (resin) and stirred well using a slow rotating mixer (approx. 300 rpm diameter of whisk approx. 1/3 of the diameter of the container). In case of using part measurements (mix A component first, homogenously), these need to be weighed exactly using an electronic scale according to the stated mixing ratio. Mix only the quantity that can be used within the pot time. Do not use straight from the delivery container! Avoid mixing air into mixture. After mixing, pour into a clean container and stir again.

ROMPOX® 1104 ESD can be applied using a squeegee and then rolled with rollers, consumption should be between 0,10 and 0,15 kg/m<sup>2</sup>.

**Please note:** Conductive value measuring can be carried out from day three, protocol measuring from day seven. In case of surface and material temperatures below +15°C, or when going below the dewpoint distance, levelling and surface faults can occur as well as adhesion problems within the coating system!

### 3.4 Application example

as ESD coating approx. 1,5mm  
on cementbound surface

Work process	Product	Consumption	Application
Surface preparation	-	-	see point 3.1
Primer	<b>ROMPOX® 1506</b> Primer	<b>min. 0,3 kg/m<sup>2</sup></b>	Flooding with rubber squeegee and then rollers
Sprinkling if required	Firedried <b>quartz sand</b> with Ø 0,1 - 0,5 mm	<b>approx. 0,5 kg/m<sup>2</sup></b>	Sprinkle evenly
Scraping filler	per 1mm layer thickness 1 wp <b>ROMPOX® 1506</b> 1 wp firedried <b>quartz sand</b> with Ø 0,06 - 0,3 mm	min. 0,8 kg/m <sup>2</sup> min. 0,8 kg/m <sup>2</sup>	With one lip hard rubber slider and then level off sharply
Conductive tape	<b>ROMPOX® 1106</b> ESD copper tape	<b>approx. 0,002m/m<sup>2</sup></b>	Remove protective strip and apply with light pressure.
Conductive layer	<b>ROMPOX® 1104</b> ESD conductive paint	<b>approx. 0,200kg/m<sup>2</sup></b>	Apply with fur roller crosswise
ESD Coating	<b>ROMPOX® 1107</b> ESD coating	<b>max. 1,8 kg/m<sup>2</sup></b>	Apply with smoothing trowel or notched trowel and aereate with metal pinfeed platen

### 3.5 Application example

as EA coating approx. 1,5mm  
on cementbound surface

Work process	Product	Consumption	Application
Surface preparation	-	-	see point 3.1
Primer and scraping filler			see point 3.4
Conductive tape	ROMPOX® 1106 ESD copper tape	approx. 0,002m/m <sup>2</sup>	Remove protective strip and apply with light pressure.
Conductive layer	ROMPOX® 1104 Conductive paint	approx. 0,200kg/m <sup>2</sup>	Apply with fur roller crosswise
ESD Coating	ROMPOX® 1107 ESD coating	max. 1,8 kg/m <sup>2</sup>	Apply with smoothing trowel or notched trowel and aereate with metal pinfeed platen

\* **Note:** If no scraping filler was applied to the primer, then sprinkling must be left out.

After application of the primer, the surface must be smooth and even. If, after surface preparation, there are any larger areas of surface roughness, then these need to be evened out using additional scraping filler made of ROMPOX® 1506 and quartz sand.

In case of surface and material temperatures below +15°C, or when going below the dew/melting point distance, levelling and surface faults can occur!

### 3.7 Cleaning

Each time work is interrupted, clean all tools and equipment with a general solvent (i.e. ethanol, white spirits).

## 4.0 Technical data of hardened product

### 4.1 Technical data of hardened product

Re-application at 23 °C	12-48	min. / max. hrs.	ROMEX® - NORM 07
Can be walked on at 23 °C	24	hrs.	ROMEX® - NORM 07
Fully hardened at 23 °C	>7	days	ROMEX® - NORM 07

### 4.2 Properties of coating

- electrically volume conductive

	ESD-Norms DIN EN 61340 part 4-1, 4-5 DIN EN 61340 part 5-1, 5-2	Tested values ROMPOX 1107 ESD coating system
Measuring of resistance to earth :	<1 x 10 <sup>9</sup> Ω <i>(corresponds to 1000 Mega Ω)</i>	DIN EN 61340 part 4-1 - fulfilled -
System test „Human-Shoe-Floor“:	<3,5 x 10 <sup>7</sup> Ω <i>(corresponds to 35 Mega Ω)</i>	DIN EN 61340 part 5-1, 5-2 - fulfilled -
Measuring static decay of 1.000 V to 50 V:	<2,0 secs.	DIN EN 61340 Teil 5-1, 5-2 - fulfilled -
(Walking Test), Measuring body tension/voltage:	<100 V	DIN EN 61340 part 4-5 DIN EN 61340 part 5-1, 5-2 - fulfilled -


**Note:** If possible, always use material from the same production batch, especially on visible surfaces, as material from different production batches, may have slightly differing colour nuances. Hardened, liquid plastics are subjected to environmental factors i.e. UV rays and can thus change visually after hardening (i.e. yellowing, loss of gloss, white discolouration). The functioning of the industrial floor is not affected by this and does not constitute a fault. The colours of the products depend on raw materials and production methods and may have slight deviations compared to the RAL colours. It cannot be guaranteed that there will be exact matching of RAL colours.

## 5.0 Safety instructions

The products contain reactive materials and are partly hazardous to health in a non-hardened state. The hardener components can cause burns due to high alkali content. It can also cause irritation or skin sensitization. Avoid skin contact. If the product does get onto the skin, wash well with soap and water. If the product gets into the eyes, rinse well with water (keep an eye wash bottle on site) and seek medical treatment immediately. The guidelines in the regulations of handling hazardous materials apply as well as information sheets provided by the professional association of the chemical industry (i.e. BG-Bau, BGR 227 „Handling of epoxy resins“). Exact details on the handling of this product can be found in the safety data sheet for ROMPOX® 1104 ESD, comp. A and B.

## 6.0 Important instructions: CE identification

DIN EN 13 813 "Screed mortars, screed mass and screeds – properties and requirements" (Jan. 2003) sets out requirements for screed mortars that are used for floor construction in interior rooms. Synthetic resin coatings and sealants are also included in this norm. Products that are in accord with the aforementioned norm are to be given the CE identification mark.

	
ROMEX® GmbH • Mühlgrabenstr. 21 • D – 53340 Meckenheim	
14 <sup>1)</sup>	
EN 13813 SR-B1,5-AR1-IR 4	
Synthetic resin screed/coating for interior use in buildings (application according to technical specifications)	
Effects when burned:	Efl <sup>2)</sup>
Release of corrosive substances (Synthetic Resin Screed):	SR
Water permeability:	NPD <sup>3)</sup>
Abrasion Resistance:	AR 0,5 <sup>4)</sup>
Adhesion strength (Bond):	B 1,5
Impact Resistance:	IR 4
Impact noise insulation:	NPD <sup>3)</sup>
Noise absorption:	NPD <sup>3)</sup>
Thermal insulation:	NPD <sup>3)</sup>
Chemical resistance:	NPD <sup>3)</sup>

The aforementioned information and instructions for application are based on our experience. Due to the numerous types of surface, application methods and physical conditions when using our materials, the information contained in these technical specifications cannot be used to make any legal claims with regard to the guarantee for the results when working with this product. The user himself is solely responsible for the results and must test the suitability of the materials. We reserve the right to make changes to the technical specifications. Only the newest version of the technical specifications is valid and this can be downloaded at [www.romex-ag.de](http://www.romex-ag.de) or requested from us in writing.

### Legend

- 1) the last two numbers of the year in which the CE identification was attached
- 2) in Germany DIN 4102 is still valid; fire class B2 is fulfilled
- 3) NPD = No Performance Determined
- 4) applies to the smooth, non sprinkled coating

## Notes

Our recommendations, which are given to assist buyers & endusers, are based on our experience and correspond to the current levels of knowledge in science and practice, however they are not binding and have no legal force. It is recommended adapting methods and quantities of product to the local needs. If necessary a sample surface should be laid beforehand

**Issue 2020-01-23 ab, hb**

TD\_gb\_ROMPOX 1104\_ESD-Leitlack\_Rev16\_2020-01



**ROMEX® GmbH**  
Mühlgrabenstr. 21  
53340 Meckenheim

### Weitere Informationen

Tel. +49 (0) 2225 / 70954-20  
Fax: +49 (0) 2225 / 70954-19

[info@romex-ag.de](mailto:info@romex-ag.de)  
[www.romex-ag.de](http://www.romex-ag.de)

