

# CONIFLOOR 435 ESD

**Two part EP self-levelling coating, volume conductive, total solid, hard, antistatic accord. to EN 61340-4-1, 4-5 and 5-1 for ESD protected areas (EPA)**

## Product description

CONIFLOOR 435 ESD is a two component, solvent free, self-levelling, pigmented, volume conductive, hard and resistant epoxy coating for ESD protective zones.

## Fields of application

CONIFLOOR 435 ESD is used as a coating on mineral, primed (with CONIFLOOR 110 or 116 LE) and with conductive primer, CONIFLOOR 150 prepared substrates for indoor floorings with medium to heavy mechanical stress, where ESD properties are required. CONIFLOOR 435 ESD is used in our indoor ESD protected areas as flooring system.

## Properties

CONIFLOOR 433 ESD is characterised by its mechanical strength and good abrasion resistance after curing. CONIFLOOR 433 ESD AS fulfils the requirements for EPA (ESD protected areas).

The resistance to earth measured according to EN 61340-4-1 is  $< 10^9$  ohms, the resistance (footwear-person-floor) accord. to EN 61340-4-5 is  $\leq 10^9$  ohms and the body voltage by walking test accord. to EN 61340-4-5 is  $< 100$  volt.

CONIFLOOR 433 ESD is resistant to water, seawater, wastewater, mineral oils, lubricants and fuels as well as a variety of alkalis, diluted acids and salt solutions.

Yellowing which may be noticeable due to UV exposure does not affect the mechanical and technical properties.

CONIFLOOR 433 ESD is used in the system

- CONIFLOOR IES ESD

or other systems.

## Technical Data

<b>Mixing ratio</b>	in parts by weight			100 : 37
<b>Density</b>	mix,	at 23 °C	g/cm <sup>3</sup>	1.21
<b>Viscosity</b>	mix,	at 23 °C	mPas	1400
<b>Processing time</b>	at 12 °C			min. approx. 25
<b>Re-coating interval / ready for foot traffic</b>	at 20 °C			minimum h 12
				maximum h 48
<b>Substrate and application temperature</b>	minimum			°C 10
	maximum			°C 30
<b>Permissible relative humidity</b>	maximum			% 75
<b>Ready for</b>	<b>mech. strain</b>	at 20 °C	d	3
	<b>light mech. strain</b>	at 20 °C	d	1
	<b>chem. strain</b>	at 20 °C	d	7
<b>Shore D hardness</b>	after 28 d			82
<b>Resistance to ground (EN 61340-4-1)</b>				Ohm min. $R_g < 10^9$
<b>Resistance system (EN 61340-4-5)</b>				Ohm min. $R_s < 10^9$
<b>Body voltage / walking test (EN 61340-4-5)</b>				<b>Volt</b> $< 100$
<i>Above figures are guide values and should not be used as a base for specifications!</i>				

### Application method

CONIFLOOR 435 ESD is supplied in the correct proportions of component A (resin) and component B (hardener). Pour component B into component A and ensure that the pail containing component B is emptied completely.

To achieve a homogenous mix, thoroughly mix with a slowly rotating mixing device at about 300 rev/min. Ensure that the mixing device reaches side and bottom areas of the mixing vessel. The mixing process takes **at least 3 minutes** and should be performed until the blend is **homogenous** and streak free.

Pour the mix into another **clean** pail and mix it again for 1 additional minute.

The **temperature** of the components should be between 15-25 °C.

CONIFLOOR 435 ESD is applied using a rubber **squeegee**, scraper or a notched trowel. The teeth size of the tool needs to be adjusted to the calculated consumption per 1m<sup>2</sup>.

Cross-wise **spike rolling** after application is necessary to **de-aerate** the coating. We recommend to **start with spike rolling only about 5 - 10 minutes after applying** the coating.

The ambient and substrate temperature influences working life and curing time of CONIFLOOR 435 ESD. At low temperatures, the chemical reactions are slowed down; this lengthens the pot life, re-coating interval and open time. High temperature and humidity accelerate chemical reactions so the contrary is true.

To fully cure the material, the substrate and working temperature must not fall below the minimum.

After application, the material should be protected from direct contact with water for approx. 8 hours (at 15 °C). Within this period, contact with water can cause foaming on the surface of the coating.

The relative **humidity** level may not exceed **75%**.

### Consumption

The **consumption rate** of CONIFLOOR 435 ESD for a layer of at least 1.5 mm is approximately 1.8 kg/m<sup>2</sup>.

### Note for checking the conductivity:

To check the conductivity, the guideline values actual state of the art report "Conductive coatings for industrial floors" Deutsche Bauchemie e.V. recommended. Note: Before applying the conductive coating, the CONIFLOOR 150 conductive layer must be measured.

Surface of coating system	Amount of measurements
< 10 m <sup>2</sup>	1 measurement / m <sup>2</sup>
10 – 100 m <sup>2</sup>	10 – 20 measurements
> 100 m <sup>2</sup>	10 measurements / 100 m <sup>2</sup>

Distance of the measuring points at least 50 cm. Measured e.g. with a MetrISO 2000 or 3000 measuring device. The measured value of the conductive layer should not exceed 10-15 kOhm. If the required measured value is not reached, further measurements must be done within 50 cm, which should then reach the measured value.

### Cleaning agent

Re-usable tools should be cleaned carefully with CLEANER 44 or e.g. isopropanol.

### Substrate condition

Cement bound substrates to be coated must be firm, dry, load bearing and free of loose and brittle particles and substances, which impair adhesion such as oil, grease, rubber skid marks, paint or other contaminants.

A pre-treatment of the substrate by grit or shot blasting, high pressure water jetting, grinding or scabbing including the necessary post-treatment is mandatory.

After the pre-treatment, the bond strength of the concrete must be at least 1.5N/mm<sup>2</sup>.

The **moisture level** must not exceed **4 %**.

The **temperature** of the substrate must be at least 3°C above the current dew point temperature.

The sub base must contain a moisture barrier (damp proof membrane D.P.M.).

CONIFLOOR 435 ESD is applied on the pre-treated and primed sub-base. The **share of binder** then is approximately 1.8 kg/m<sup>2</sup> at a thickness of 1.5 mm layer.

The **maximum thickness** of this coating layer should not exceed 2.5 mm.

After the pre-treatment, the bond strength of the concrete must be at least 1.5 N/mm<sup>2</sup>.

As for the rest the sections of the requirements concerning substrates to be coated shown in the according guidelines apply.

### Pack size

CONIFLOOR 435 ESD is supplied in 25 kg (metal) working packs. Components A and B are supplied in the correct proportions and delivered separately.

### Colour

Standard colours: ca. RAL 7032 (grey) and RAL 7035 further colours upon request.

### Storage

Store in unopened pails under dry conditions at a temperature range of 5-25 °C.

Do not expose to direct sunlight. Before use, please see "best before" date on the pail / drum.

### Safety precautions

CONIFLOOR 435 ESD is non-hazardous in its cured condition.

For protective measures, transport regulations and waste management please refer to the Material Safety Data Sheet of the product.

### VOC contents

CONIFLOOR 435 ESD meets the requirements of the EC directive 2004/42/EC.



**CE-Label:**  
See Declaration of Performance.

CONICA AG  
Industriestrasse 26  
8207 Schaffhausen  
Suisse

Tel.: + 41 52 644 3600  
Fax: + 41 52 644 3699  
[info@conica.com](mailto:info@conica.com)  
[www.conica.com](http://www.conica.com)

Whilst any information contained herein is true, accurate and represents our best knowledge and experience, no warranty is given or implied with any recommendations made by us, our representatives or distributors, as the conditions of use and the professional competence involved in the application of the product are beyond our control.

*As all CONICA data sheets are updated on a regular basis, it is user's responsibility to obtain the most recent issue. Registered users can obtain the actual data sheets from our webpage. Hard copies are available upon request.*