

# EPOXYCOAT-VSF

## Two-component, solvent-free epoxy coating

### Description

EPOXYCOAT-VSF is a two-component, solvent-free, colored epoxy system offering high hardness and abrasion resistance. Specifically designed for highly aggressive chemical environments, it shows resistance to acids, alkalis, petroleum products, solvents, water, seawater, etc.

Certified according to EN 1504-2 and classified as a coating for surface protection of concrete. Certificate No.: 2032-CPR-10.11. CE marked.

### Fields of application

EPOXYCOAT-VSF is used as a protective and decorative coating on cement-based substrates, e.g. concrete, plaster, cement screeds, and metal surfaces. Suitable for industrial areas, laboratories, canned food factories, wine-making factories, slaughterhouses, gas stations, car repair shops, etc. Also suitable for food contact surfaces according to W-347, ISO 8467.

### Technical data

Base:	two-component epoxy resin
Colors:	RAL 7032 (pebble grey) other colors upon order
Viscosity:	1,550 mPa·s at +23°C
Density:	1.30 kg/l
Mixing ratio (A:B):	77:23 by weight
Pot life:	40 min at +23°C
Volume solids:	~ 91%
Gloss level: (EN ISO 2813: ≥ 60 at 60°)	78, Gloss
Minimum hardening temperature:	+8°C
Walkability:	after 24 h at +23°C
Recoat time:	after 24 h at +23°C
Final strength:	after 7 days at +23°C
Abrasion resistance: (EN ISO 5470-1)	< 3,000 mg

Capillary absorption and permeability to water: 0.01 kg/m<sup>2</sup>·h<sup>0.5</sup>  
(EN 1062-3, requirement of EN 1504-2: w < 0.1)

Resistance to thermal shock  
(EN 13687-5):

- a) No bubbles, cracks or delamination
- b) Pull-off test: ≥ 2 N/mm<sup>2</sup>

Impact resistance:  
(EN ISO 6272-1)

8 Nm (Class I)

Adhesion strength by pull-off test:  
(EN 1542)

> 3 N/mm<sup>2</sup>  
(failure of concrete)

Reaction to fire:  
(EN 13501-1)

Euroclass F

Chemical resistance:

see the table in the annex below

Cleaning of tools:

Tools should be cleaned with SM-25 solvent immediately after use.

### Directions for use

#### 1. Substrate preparation

The surface to be coated should be:

- Dry and stable.
- Free of materials that might impair bonding, e.g. dust, loose particles, grease, etc.
- Protected from underneath moisture.

It should also meet the following requirements:

##### a) Cementitious substrates

Concrete quality: at least C20/25

Cement screed quality: cement content 350 kg/m<sup>3</sup>

Age: at least 28 days

Moisture content: less than 4%

##### b) Iron or steel substrates

It should be free of rust or any dirt that might impair bonding. Depending on the nature of the substrate, it should be prepared by brushing, grinding, milling, sandblasting, water blasting, shot blasting, etc. Then, the surface should be cleaned from dust with a high-suction vacuum cleaner.

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## 2. Priming

### a) Cementitious substrates

Cement-based surfaces are primed with DUROFLOOR-BI epoxy impregnation agent in one layer.

Consumption of DUROFLOOR-BI: ~ 150 g/m<sup>2</sup>.

EPOXYCOAT-VSF should be applied within 24 h from priming, providing it has dried.

Alternatively, the water-based epoxy primer EPOXYPRIMER-500, thinned with water up to 30% by weight, can be used. The product is applied by brush or roller in one coat.

Consumption of EPOXYPRIMER-500: 150-200 g/m<sup>2</sup>.

EPOXYCOAT-VSF should be applied within 24-48 h from priming and as soon as moisture content falls below 4%.

### b) Metal substrates

Metal substrates are primed with EPOXYCOAT-AC anti-corrosion epoxy coating in two coats.

Consumption: 150-200 g/m<sup>2</sup>/coat.

## 3. Mixing of components

Components A (resin) and B (hardener) are packaged in two separate containers, at the correct fixed mixing ratio by weight. Before mixing, component A is stirred mechanically for 1 min. Then, all of component B is added to component A and the two components are mixed continuously for about 5 min with a low-speed mixer (300 rpm) until a uniform mix is obtained. It is important to thoroughly stir the mixture near the sides and bottom of the container to achieve uniform dispersion of the hardener. To ensure thorough mixing, the mixture is poured into a clean container and mixed again for at least 1 min until fully homogeneous.

## 4. Application – Consumption

EPOXYCOAT-VSF should be applied within 24 hours from priming and after the primer has dried.

EPOXYCOAT-VSF is used as is. It is applied by roller, brush or spray in at least 2 coats. The second coat is applied after the first one has dried, but within 24 hours.

Consumption: 200-300 g/m<sup>2</sup>/coat.

## Packaging

EPOXYCOAT-VSF is supplied in containers (A+B) of 10 kg, with components A and B at a fixed ratio by weight.

## Shelf life – Storage

12 months from production date if stored in original sealed packaging, in areas protected from humidity and direct sunlight. Recommended storage temperature between +5°C and +35°C.

## Remarks

- Working time of epoxy materials is affected by the ambient temperature. The ideal temperature of application is between +15°C and +25°C, for which the product obtains optimal workability and curing time. Room temperature below +15°C will prolong the curing time, while temperatures above +30°C will reduce it. It is recommended to mildly preheat the product in the winter and store the product in a cool room before application in the summer.
- Bonding between successive coats may be severely affected by moisture or dirt.
- Epoxy coats should be protected from moisture for 4-6 hours after application. Moisture may whiten the surface or/and make it sticky. It may also disturb hardening. Faded or sticky layers in parts of the surface should be removed by grinding or milling and laid again.
- In case recoat time (between successive coat) is longer than expected or old floors are to be overlaid again, the surface should be thoroughly cleaned and ground before applying the new coat.
- After hardening, EPOXYCOAT-VSF is totally safe for health.
- Please consult the directions for safe use and precautions written on the packaging before use.

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## Volatile Organic Compounds (VOCs)

According to Directive 2004/42/CE (Annex II, table A), the maximum allowed VOC content for the product subcategory j, type SB, is 500 g/l (2010) for the ready-to-use product.

The ready-to-use product EPOXYCOAT-VSF contains a maximum of 500 g/l VOC.



2032

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### EN 1504-2

Surface protection products  
Coating

DoP No.: EPOXYCOAT-VSF/1823-02

Abrasion resistance: < 3000 mg

Capillary absorption:  $w < 0.1 \text{ kg/m}^2 \cdot \text{h}^{0.5}$

Resistance to thermal shock:  $\geq 2.0 \text{ N/mm}^2$

Impact resistance: Class I

Resistance to severe chemical attack: Class II

Adhesion strength:  $\geq 3.0 \text{ N/mm}^2$

Reaction to fire: Euroclass F

Dangerous substances comply with 5.3

# EPOXYCOAT-VSF

## Chemical Resistance ANNEX

Test group*	T	1d	3d	7d	28d	90d	180d	360d
PG 1 (Petrol)	20°C	A	A	A	A	X	X	X
PG 4 (all hydrocarbons w/o Benzol, unused engine and lubricating oils, jet fuels, heating fuel, Diesel; incl. PG 2, 3))	20°C	A	A	A	A	X	X	X
PG 4a (Benzol)	20°C	A	A	A	A	A	A	X
PG 5 (Alcohols with max. 48% Methanol, Glycol Ether))	20°C	A	A	A	X	X	X	X
PG 5a (all Alcohols and Glycol Ether)	20°C	A	A	A	X	X	X	K
PG 6a (Aliphatic and aromatic halogen hydrocarbons)	20°C	K						
PG 7 (Esters and Ketones)	20°C	A	A	A	X	K		
PG 8 ((aqueous solutions of Aliphatic Aldehydes up to 40%))	20°C	A	A	A	X	X	X	X
PG 9 (aqueous solutions of organic acids up to 10%)	20°C	A	A	A	X	X	X	K
PG 9a (organic acids (carbon acids, except formic acid) and the respective salts (in aqueous solutions))	20°C	A	A	K				
PG 10 (Inorganic acids up to 20%)	20°C	A	A	A	X	X	X	X
PG 11 (Inorganic alkalis)	20°C	A	A	A	A	A	A	A
PG 15 (cyclic and acyclic Ethers)	20°C	A	A	A	K			
PG 15a (acyclic Ethers)	20°C	A	A	A	X	X	X	X
Test medium	T	1d	3d	7d	28d	90d	180d	360d
Ethanol 96%	20°C	X	X	X	X	X	K	
Ammonia 10%	20°C	A	A	A	X	X	X	X
Heating fuel	20°C	A	A	A	A	A	A	A
NaOH 50%	20°C	A	A	A	A	A	A	A
Nitric acid 20%	20°C	A	A	X	X	K		
Hydrochloric acid 37%	20°C	A	A	A	X	X	K	
Sulphuric acid 50%	20°C	A	A	A	X	X	X	X
Sulphuric acid 80%	20°C	A	X	X	X	X	X	X

A: Resistant

X: Resistant but with discoloration

K: Not resistant

\*according to EN 13529

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