

Torggler

Waterproofing

EPOXY

Two-component epoxy protection coating.



- Solvent-free
- Resistant to chemicals
- High thickness also in vertical



APPLICATION AREAS

Epoxy is particularly suitable for:

- The protection of concrete substrates and porous mineral substrates in general (stone, cement mortar), but is also used on steel, iron or aluminium
- The inner coating of containers, silos or tubing
- The corrosion and acid protection of concrete or steel structures in general
- The coating of in waste water treatment plants
- Protective coatings in the chemical or galvanic industries, in agriculture, in dyeing plants, laundries, tanneries, etc.

TYPES OF SUBSTRATE

Epoxy is ideal for acid and corrosion protection of concrete, stone, cement mortar surfaces, but also steel, iron and aluminium.

FEATURES

Epoxy is a solvent-free two-component epoxy protective coating that can also be applied with considerable thickness, even vertically. Its chemical nature makes the hardened coating particularly resistant to chemical agents (mineral and organic acids, alkaline solutions and substances). As it contains neither organic solvents nor water, you can use Epoxy for greater thickness values than those which can be obtained with water-based or solvent-based products. Epoxy is a protective coating (type C) for the surfaces of concrete structures according to EN 1504-2, which can be used according to the following principles according to EN 1504-9: Protection against the risks of penetration (principle 1), moisture control (principle 2), increased physical resistance (principle 5), improved chemical resistance (principle 6) and increased resistivity (principle 8).

WARNINGS

- Due to the very strong slowing down of the cross-linking, the application of Epoxy at temperatures below +10 °C is not recommended.
- If stored for more than one day at temperatures below approx. +10 °C, component A may be coagulated by the effect of crystallisation of the epoxy resin it contains. This phenomenon does not represent a defect and can be easily eliminated by bringing the affected containers to +40 °C overnight.

INSTRUCTIONS FOR USE

Preparation for use

The substrate must be solid, free of loose particles and cement patina, clean and regular. It can be damp but must not be wet, as drops of surface water greatly reduce the adherence of the coating to the substrate. We recommend the application of a coat of Emulsione Epossidica 723 (50-70 g/m²) as primer in the case of particularly damp substrates. 24 hours after applying the base coat, the first coat of Epoxy can be applied. Metal substrates must be sandblasted.

Product preparation

Mix the two pre-dosed components intimately into the original containers by pouring component B into component A and mix with an electric mixer without introducing air until a homogeneous mass is obtained.

Instructions for use

Epoxy can be applied with a brush, a roller or by spraying (airless). In case of spray application, workability can be improved by adding approx. 0.5% of a solvent (e.g. toluene) when mixing the two components. Apply the mixed product in at least two coats of 300 g/m² each; the theoretical thickness obtained by applying the above quantities is about 470 micrometers. Each coat should be applied when the underlying coat is sufficiently hardened (under normal conditions this takes about 24 hours). The pot-life of the product is approx. 1 hour at +20 °C, while higher temperatures shorten it and lower temperatures lengthen it.

NOTE: the viscosity of component A tends to increase over time. This is an inevitable phenomenon which does not compromise the performance of the product applied. To lower the viscosity, just add a small amount of solvent, e.g. 0.3-0.5 % toluene, when mixing with component B.

Cleaning

When the product is fresh, the tools can be cleaned with solvents (e.g. toluene or white spirit).

WAITING TIMES

A film of Epoxy at a temperature of +20 °C can be walked on after approx. 8 hours, at +10 °C only after 16 hours. It hardens completely after 10 days of curing at +20 °C, while at +10 °C it does not harden until 20 days after application.

TECHNICAL SPECIFICATIONS

Appearance	component A: pasty liquid, component B: liquid
Colour	component A: grey, component B: colourless
Solvent content (Deutsche Bauchemie e.V.)	none
Mixing ratio	C. A : C. B = 80:20
Density of mix A+B (UNI 8490/2)	1.26 g/ml

Application temperature	from +10 °C to +50 °C	
Pot life (EN ISO 9514)	at 30 °C: approx. 30 minutes, at 20 °C: approx. 45 minutes, at 10 °C: approx. 80 minutes	
Mixture viscosity A+B (MIT 3C*)	10 °C: 7.1 Pa*s, 23 °C: 2.4 Pa*s, 30 °C: 1.7 Pa*s (viscosity gradient = 50/s)	
Tensile strength (DIN 53455, punch no. 5)	at 24 hours: 1.5 N/mm ² , at 7 days: 7 N/mm ² , at 28 days: >8 N/mm ²	
Tensile strength (DIN 53455, punch no. 5)	at 24 hours: 55%, at 7 days: 20%, at 28 days: 15%	
Progression of hardening – Shore hardness (EN ISO 868)	Shore A/15 at 23 °C: after 8 h: 35, after 24 h: 68, after 3 days: 79, after 7 days: 86, can be walked on after 8 h	
Maximum operating temperature	+80 °C	
Parameter	Value	EN 1504-2 limits/classes
Adhesion by pull-off test (EN 1542)	3.1 N/mm ²	>1.5 N/mm ² (traffic), >0.8 N/mm ² (no traffic)
Permeability to CO ₂ (EN 1062-6)	S _d = 179 m (thickness = 300 µm)	Class II
Capillary absorption (EN 1062-3)	0.012 kg/m ² h ^{0.5}	<0.1 kg/m ² h ^{0.5}
Permeability to water vapour (EN ISO 7783-1)	S _d = 19 m (thickness = 300 µm)	Class II
Impact resistance (EN ISO 6272)	Class II	No cracks and flaking
Abrasion resistance (EN ISO 5470-1)	Weight loss: 0.21 g	<3 g
Resistance to severe chemical attack (EN 13529)	Class II: Acetic acid 10%, Sulphuric acid 20%, Sodium hydroxide 20%	Drop in Shore Hardness D < 50%
Resistance to chemical agents (EN 12808-1)	A table detailing resistance to accidental and permanent contact is available on request.	

* Torggler's Internal Methods (MIT) are available on request.

Color	Grey
Bicomponent	2 components
Packaging	bucket
Packaging size	4x3 kg

CONSUMPTION

The consumption of Epoxy is 300 g/m² each coat.

STORAGE

When stored at a temperature between +5 °C and +30 °C in its original sealed packaging Epoxy is stable for at least 24 months.

The information contained in this document is reported on the basis of our experience and knowledge; therefore, any recommendations and suggestions made are without any guarantee and must be verified before using the product by those who intend to use it, who assume all responsibility that may result from its use since the conditions of use are not under our direct control. In case of doubt, it is always advisable to make preliminary tests and/or ask for the intervention of our technicians. Torggler reserves the right to modify, replace and/or delete the items, as well as to change the product data in this document without prior notice; in this case the indications given here may no longer be valid. Always refer to the latest version of the data sheet, available at www.torggler.com. Version 11.02.2021.