Metric Epocoat

Epoxy protective product with high chemical resistance for concrete.

Metric Epocoat is a two-component epoxy covering compliant with standard EN 1504-2(C), for the protection of concrete structures to be in contact with or used for containing aggressive substances.

1. Certified EN 1504-2 (C)
2. For the protection against severe attacks
3. Colour grey
4. High coverage

GREENBUILDING RATING
REF. GBR DATA REPORT 10.23
APPROVED

Rating 0

Product with none of the requisites of the GreenBuilding Rating, must be used with care.
Kerakoll undertakes to improve the ratings of Rating zero materials and products.

kerakoll

Areas of application

→ Intended use:
Coloured covering with a gloss finish for the protection of the internal surface of reservoirs, concrete security and purification tanks, to be in contact with or used for containing aggressive substances such as oil, hydrocarbons, and acids.

Instructions for use

→ Preparation of substrates
The substrates must be stable, non-deformable, having already completed the hygrometric shrinkage and without cracks, smooth, compact, and without porosity. The substrates must also be clean, free from dust, oil, grease, detaching substances, and loose or poorly cohesive debris. On substrates already in use, scaling, salt, mould, and previous coatings must be removed. It is advisable to carry out the preparation with sandblasting.
Select in any case the most appropriate method for the specific conditions of the substrate.
Any repair or finishing of the substrate must be carried out using the Geolite or Metric ranges . After mechanical preparation and cleaning, the supports must have a compressive strength of > 25 N/mm² and a surface tear strength of >1.5 MPa. The substrates must be dry and free from moisture rising in counterthrust.
If the residual moisture is above 4%, the substrates must be treated with Metric Osmotic. Alternatively with 3CW that can also be used diluted or added with Quarzo 1.3 on dried substrates for the finishing of slight irregularities, filling any porosity, and for homogenising the absorption of the substrate.

→ Preparation
Metric Epocoat is prepared by mixing component A with component B (preset ratio 4:1 in the packagings) with a low-rev, mechanical stirring device (< 500 r./min.) or by hand, until a liquid of uniform consistency and colour is obtained.
Then dilute ≈ 5% with DD. It is necessary to mix an amount of product that can be used within ≈ 20 min.

→ Application
Metric Epocoat can be applied using a roller, or brush in one or more coats. Generally, it is recommended to apply at least 2 coats on vertical surfaces and at least 3 coats on horizontal surfaces subject to foot traffic. If a non-slip surface is required, the first coat must be applied after adding to the product 5% of Quarzo 1.3. In this case, during application it is necessary to mix constantly the mixture in order to avoid sedimentation of the quartz. Overlaying must be carried out within a period of 24 hours from the previous application.

→ Cleaning
Residual traces of Metric Epocoat can be removed from tools with solvents before the product hardens.

Certificates and marks

CE EN 1504-2(C)

S-P-11327 EPD environdec.com

Abstract

Supply and laying of an epoxy protective product with high chemical resistance, such as Metric Epocoat by Kerakoll, for the protective covering of concrete tanks or reservoirs, to be applied by roller or brush after adequate preparation of the substrates. CE-marked and compliant with the performance requirements of Standard EN 1504-2 (C); according to Principles as defined by Standard EN 1504-9.

Technical Data compliant with Kerakoll Quality Standard		
Appearance	Part A: grey paste / Part B: straw-coloured liquid	
Appearance once mixed	light grey liquid (RAL 7035)	
Volumetric mass	part A 1780 kg/m³ – part B 1050 kg/m³	
Shelf life	≈ 12 months from production in the original sealed packaging	
Warning	Protect from frost. Avoid direct exposure to sunlight and sources of heat	
Pack	part A bucket 4 kg / part B bottle 1 kg	
Mixing ratio	part A : part B = 4 : 1	
Viscosity of the mixture	≈ 15000/140 mPa · s (rotor 7 RPM 50/100)	Brookfield method
Density of the mixture	≈ 1560 kg/m³	
Pot life	≈ 20 min.	
Temperature range for application	from +5 °C to +35 °C	
Foot traffic	≈ 24 hrs	
Waiting time for overlaying	≈ 24 hrs	
Interval before normal use	≈ 7 days	
Coverage	minimum 0.5 kg/m² for two coats	

Values taken at +21 °C, 60% R.H. and no ventilation. Data may vary depending on specific conditions at the building site.

Performance

HIGH-TECH

Performance characteristic	Test Method	Requirements of EN 1504-2 (C)	Performance Metric Epocoat
Carbon dioxide permeability	EN 1062-6	s_D (CO_2) > 50 m	s_D (CO_2) > 310 m
Permeability to water vapour	EN ISO 7783-2	Reference class	Clas III: sD > 50 m
Capillary absorption and water permeability	EN 1062-3	w < 0.1 kg·m^{-2}·h$^{-0.5}$	w < 0.1 kg·m^{-2}·h$^{-0.5}$
Bond strength by pull off	EN 1542	≥ 2 MPa	> 3,5 MPa
Resistance to abrasion	EN ISO 5470-1	loss of weight < 3000 mg	value exceeded
Adhesion following thermal shock	EN 13687-5	≥ 2 MPa	> 3,5 MPa
Resistance to impact	EN ISO 6272-1	Reference class	Class I: ≥ 4 Nm
Resistance to fire	EN 13501-1	Euroclass	B_{fl}-s1 D-s2, d0

Performance			
Resistance to severe chemical attacks - Performance requirements according to EN 1504-2			
Group 2 according to EN 13529	**Testing liquid**		**Performance * Metric Epocoat**
1. Petrol	47.5%	toluene by volume	Class I Class II
	30.4%	isooctane by volume	
	17.1%	n-heptane by volume	
	3.0%	methanol by volume	
	2.0%	tertiary butanol by volume	
2. Aviation fuel	1	50% isooctane by volume	Class I Class II
		50% toluene by volume	
	2	100LL Aviation fuel, Nato code F-18	
	3	A-1 Turbo fuel, Nato code F-34/F-35	
3. Unused heating oil, diesel oil and oils for engine and gear	80.0%	by volume of n-paraffin (C12-C18)	Class I Class II
	20.0%	methylnaphthalene by volume	
4. All hydrocarbons including groups 2 and 3 except 4a) and 4b) and used oils for engine and gear	60.0%	toluene by volume	Class I Class II
	30.0%	xylene by volume	
	10.0%	methylnaphthalene by volume	
5. Mono- and poly-alcohols (up to 48% methanol by volume), glycol ethers	48.0%	methanol by volume	Class I
	48.0%	isopropanol by volume	
	4.0%	water by volume	
8. Aliphatic aldehydes	35-40%	of formaldehyde solution	Class I Class II
9. aqueous solution of organic acids up to 10%	10% aqueous acetic acid		Class I Class II
10. Inorganic acids up to 20% and acid hydrolysis salts in aqueous solution (pH<6) except hydrofluoric acid and oxidising acids and their salts	Sulphuric acid (20%)		Class I Class II
11. Inorganic bases up to 20% and their salts with alkaline hydrolysis in aqueous solution (pH > 8) except ammonium solutions and oxidising solutions of salts (e.g. hypochlorite)	Sodium hydroxide (20%)		Class I Class II
12. Solution of inorganic non-oxidising salts with pH = 6-8	Aqueous solution of Sodium Chloride (20%)		Class I Class II
15. Cyclic and acyclic ethers	Tetrahydrofuran (THF)		Class I

* Class I: after 3 days of contact with no pressure
Class II: after 28 days of contact with no pressure
Class III: after 28 days of contact with no pressure

Warning

→ Product for professional use
→ abide by any standards and national regulations
→ abide by any standards and national regulations
→ store the product away from any sources of humidity and out of direct sunlight
→ use at temperatures between +5 °C and +35 °C
→ do not add binders or additives to the mixture
→ do not apply to dirty, loose and flaking surfaces
→ do not apply on gypsum, metal or wood
→ following application, protect from direct sunlight and wind
→ allow the product to cure during the first 24 hours
→ if necessary, ask for the safety data sheet
→ for any other issues, contact the Kerakoll Worldwide Global Service +39 0536 811 516 - globalservice@kerakoll.com

Kerakoll Spa
via dell'Artigianato 9
41049 Sassuolo - MO

+39 0536.816.511
info@kerakoll.com

www.kerakoll.com