

PE-CR : CHEMICAL RESISTANT EPOXY

TECHNICAL DATA SHEET

DESCRIPTION

PE-CR is a solvent-less, two component epoxy coating system. It exhibits very good appearance and chemical and physical properties. It has a VOC content of 37 g/L. It has very good solvent and chemical resistance.

ADVANTAGES

- Dense surface, resistant to bacteria and moisture and easy to clean
- May apply several layers on itself
- Contains no solvent, allowing for interior application without harmful odors
- Excellent adhesive properties, allowing application on other firm and hard coating, as well as a good bond to the substrate
- Excellent chemical and solvent resistance
- Exceptional abrasion resistance

TECHNICAL DATA PROPERTIES @ 73°F (23°C) AND 50% R.H.

PACKAGING	3 US gal (11.35 L) OR 15 US GAL KIT (56.7 L)		
COLOR	Upon Request		
RECOMMENDED THICKNESS	16 MILS (100 ft ² /gal)		
SHELF LIFE	12 months in original unopened factory sealed containers. Keep away from extreme cold, heat, or moisture. Keep out of direct sunlight and away from fire hazards.		
MIX RATIO, BY VOLUME	A:B = 2:1		
POT LIFE	50 minutes @ 50°F (10°C) 25 minutes @ 68°F (20°C) 15 minutes @ 86°F (30°C)		
SOLIDS CONTENT, BY VOLUME	100%		
SOLIDS CONTENT, BY WEIGHT	100%		
DENSITY (KG/L)	PART A	PART B	MIX
CLEAR	1.05-1.10	0.9-1.0	-
COLOURS	1.10-1.15	0.9-1.0	-
THINNER RECOMMENDED	Xylene		

WAITING TIME/ OVERCOATABILITY	SUBSTRATE TEMPERATURE		MINIMUM	MAXIMUM	
	BEFORE APPLYING PE-CR OVER PRIMER	+ 50°F (10°C)		24 hours	3 days
+ 68°F (20°C)		12 hours	2 days		
+ 86°F (30°C)		6 hours	1 day		
BEFORE APPLYING SECOND COAT OF PE-CR	+ 50°F (10°C)		30 hours	3 days	
	+ 68°F (20°C)		24 hours	2 days	
	+ 86°F (30°C)		16 hours	1 day	
DRYING TIMES	SUBSTRATE TEMPERATURE		FOOT TRAFFIC	LIGHT TRAFFIC	FULL CURE
	+ 50°F (10°C)		30 hours	5 days	10 days
	+ 68°F (20°C)		24 hours	3 days	7 days
	+ 86°F (30°C)		16 hours	2 days	5 days

* Times are approximate and will be affected by changing ambient conditions, especially changes in temperature and relative humidity.

VOC (G/L)	PART A	PART B	MIX
	46.4 g/L	0 g/L	36.9 g/L
BOND RESISTANCE (PSI), ASTM D4541	> 300 (substrate ruptures)		
PERMEABILITY (%), ASTM D570	0.3%		
HARDNESS (SHORE D), ASTM D2240	85-90		
ABRASIVE RESISTANCE, ASTM D4060 (CS17 / 1000 CYCLES / 1000 G)	0.10 g		
VISCOSITY @ 77°F (25°C)	PART A	PART B	MIX
CLEAR	1300-1700	900 - 1200	1000-1400
COLOURS	3000-4000	900 - 1200	1400-2000
TENSILE STRENGTH (PSI), ASTM D638	6500		
COMPRESSIVE STRENGTH (PSI), ASTM D695	7800		
ELONGATION (%), ASTM D638	6.7		

* The indicated mileage is calculated for flat surfaces. A porous or imperfect surface will require more material in order to cover the same mileage. *

SURFACE PREPARATION

Old concrete

Concrete surface must be cleaned. BLASTRAC, sand blasting, diamond grinder w/30 grit or coarse, or water blasting is highly recommended to remove surface contaminants. Any oils and fats must be removed prior to product application. Acid etching may be required (followed by a thorough rinsing) to open the pores of the concrete to accept a primer. Do not apply to wet substrates. Chloride, moisture, and pH levels should be checked prior to application.

New concrete

The concrete should be allowed to cure for a minimum of 30 days. Compression resistance of concrete must be at least 25 MPa (3625 lb/inch²) after 28 days and traction resistance must be at least 1,5 MPa (218 lb/in²). BLASTRAC, sand blasting, diamond grinder w/30 grit or coarser or acid etching (followed by a thorough rinsing) is required to remove the surface laitance that appeared during the curing process. A primer should be used to reduce out-gassing and promote adhesion.

MIXING

Materials should be pre-conditioned to a minimum of 50°F (10°C) prior to use. Thoroughly mix each component separately. Pour component B into component A using the proper mixing ratio of 2A:1B by volume. Mix both components for at least 1 minute using a drill at low revolution (300 to 450 rpm) to reduce trapping of air. While mixing, scrape bottom and walls of container at least once to ensure a homogeneous mix. Only prepare quantity that may be applied during pot life of mixture.

APPLICATION

Apply mixed product on the prepared surface tightly (thin film) using a rubber rake and pass a roller to obtain a uniform coating. Avoid creating puddles.

CLEANING

Clean all tools and materials with the cleaner/thinner for epoxies. Wash hands and skin carefully with warm soapy water. Once product has hardened, it may only be removed through mechanical means.

RESTRICTIONS

- Minimum/Maximum temperature of substrate: 50°F / 86°F (10°C / 30°C)
- Maximum relative humidity during application and curing: 85 %
- Substrate temperature must be 5.5°F (3°C) above dew point measured
- Humidity content of substrate must be < 4 % when coating is applied
- Do not apply on porous surfaces where a transfer of humidity may occur during application
- Avoid exterior use on substrates at ground level
- Protect from humidity, condensation and contact with water during the 24 hour initial curing period
- Surface may discolor in areas exposed to regular ultraviolet light

CHEMICAL RESISTANCE

TEST GROUP	1 DAY IMMERSION	1 DAY SPILLAGE	3 DAYS IMMERSION	3 DAYS SPILLAGE	7 DAYS IMMERSION	42 DAYS IMMERSION
PETROL CONTAINING MAX. 5 VOL.-% BIO ALCOHOL	A	A	A/D	A	A/D	B/D
AIRCRAFT FUEL	A	A	A	A	A/D	A/D
HEATING FUEL / UNUSED ENGINE AND LUBRICATING OILS	A	A	A	A	A	A
ALL HYDROCARBONS CONTAINING MAX. 5 VOL.-% BENZENE, EXCEPT PETROL	A/D	A	B/D	A	B/D	B/D
CRUDE OIL	A	A	A/D	A/D	A/D	A/D
USED ENGINE AND LUBRICATING OILS	A/D	A	A/D	A/D	A/D	A/D
ALCOHOLS (MAX. 48 VOL.-% METHANOL), GLYCOL ETHERS	A/D	A	A/D	A	B/D	B/D
ALL ALCOHOLS AND GLYCOL ETHERS	B/D	A	B/D	A/D	C	C
ALIPHATIC AND AROMATIC HALOGEN HYDROCARBONS $\geq C_2$	B/D	A	B/D	A	C	C
AROMATIC HALOGEN HYDROCARBONS	A/D	A	B/D	A	B/D	C
ALL ESTERS AND KETONES	B	A	B/D	A	B/D	C
AROMATIC ESTERS AND KETONES	A/D	A	A/D	A	A/D	B/D
BIODIESEL	A/D	A/D	A/D	A/D	A/D	A/D

A = Resistant B = Limited Resistant C = Not Resistant D = Discolouration a/o loss of gloss (irreversible)

CHEMICAL RESISTANCE

TEST GROUP	1 DAY IMMERSION	1 DAY SPILLAGE	3 DAYS IMMERSION	3 DAYS SPILLAGE	7 DAYS IMMERSION	42 DAYS IMMERSION
WATERY SOLUTIONS OF ALIPHATIC ALDEHYDES (UP TO 40%)	A	A/D	A/D	A/D	A/D	A/D
ALIPHATIC ALDEHYDES INCLUDING THEIR WATERY SOLUTIONS	C	A	C	A	C	C
WATERY SOLUTIONS OF ORGANIC ACIDS (CARBON ACIDS) (UP TO 10%) INCLUDING THEIR SALTS (IN WATERY SOLUTION)	A/D	A/D	A/D	A/D	A/D	C
ORGANIC ACIDS (CARBON ACID) INCLUDING THEIR SALTS (IN WATERY SOLUTION) EXCEPT FORMIC ACID	A/D	A/D	B/D	A/D	C	C
MINERAL ACIDS (UP TO 20 %) AND ACIDIOUS HYDROLYSING SALTS (PH < 6)	A/D	A/D	A/D	A/D	A/D	A/D
ANORGANIC LYES AND ALKALINE HYDROLYSING SALTS (PH > 8)	A	A	A/D	A	A/D	A/D
WATERY SOLUTIONS OF ANORGANIC, NON-OXIDIZING SALTS (PH 6-8)	A	A	A	A	A	A
AMINES AND THEIR SALTS (IN WATERY SOLUTION)	A/D	A	A/D	A	B/D	B/D
WATERY SOLUTIONS OF ORGANIC TENSIDES	A/D	A	A/D	A/D	A/D	A/D
CYCLIC AND ACYCLIC ETHERS	B/D	A	C	A	C	C
ACYCLIC ETHERS	A/D	A	A/D	A	B/D	C
LACTIC ACID 30%	A/D	A/D	A/D	A/D	A/D	B/D
NA-HYPOCHLORITE 4.4%	A/D	A	A/D	A/D	A/D	A/D

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HEALTH AND SAFETY

In case of skin contact, wash with water and soap. In case of eye contact, immediately rinse with water for at least 15 minutes. Consult with a doctor. For respiratory problems, transport victim to fresh air. Remove contaminated clothes and clean before reuse.

Components A and B contain toxic ingredients. Prolonged contact of this product with the skin is susceptible to provoke an irritation. Avoid eye contact. Contact with may cause serious burns. Avoid breathing vapors release from this product. This product is a strong sensitizer. Wear safety glasses and chemical resistant gloves. A breathing apparatus filtering organic vapors approved by the NIOSH/MSHA is recommended. Predict suitable ventilation.

Consult the material safety data sheet for further information.

IMPORTANT NOTICE

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