

FlexCrete 400

Epoxy Polysulfide Elastomeric Coating for Potable Water Tanks



DESCRIPTION • *FlexCrete 400* is a two-component, non-toxic, epoxy polysulfide-based elastomeric coating with excellent chemical and abrasion resistance.

FlexCrete 400 combines the features of epoxy and polysulfide to produce a tough and flexible seamless waterproofing membrane with outstanding physical properties.

USES • *FlexCrete 400* has been designed for potable water applications: water tanks, canals, culverts, de-mineralized water, swimming pools and other above and below ground structures.

FlexCrete 400 is commonly used as protective coating applied over a variety of substrates such as concrete, masonry, asphalt and steel.

FlexCrete 400 is also specified to be used as a protective coating for floors and walls in hospital operation rooms, dental and veterinary clinics.

COMPLIANCE • *FlexCrete 400* complies with BS 6920 Part 1-2000 for suitability for use in contact with water intended for human consumption, and ASTM C957-1998 requirements for liquid-applied elastomeric waterproofing membrane.

ADVANTAGES

- ✓ No primer is required.
- ✓ Liquid applied.
- ✓ Non-toxic.
- ✓ Provides a seamless coating.
- ✓ High build - 400 microns DFT per coat.
- ✓ Flexible with crack bridging ability up to 2 mm.
- ✓ U.V. and weather resistant.
- ✓ High bond strength to a variety of substrates and building materials.
- ✓ Resists positive and negative pressure.
- ✓ Excellent abrasion resistance.
- ✓ Excellent chemical resistance.
- ✓ Easy to apply with roller, brush or airless spray.
- ✓ Tolerates a wide range of temperatures.

LIMITATIONS • Never apply to new concrete surfaces before they have been allowed to cure for a minimum of 28 days. *FlexCrete 400* is only a fine coating; it should not be used to fill cracks or holes in the surface. *FlexCrete 400* must be applied at a minimum dry film thickness (DFT) of 400 microns.

PHYSICAL PROPERTIES

Solids Volume	100 %
Specific Gravity	1.3 ± 0.05
Pot Life	

@ 20°C @ 35°C @ 45°C	75 minutes 50 minutes 30 minutes
Tack Free Time @ 20°C @ 35°C @ 45°C	6 hours 3 hours 2 hours
Full Cure @ 20°C @ 35°C @ 45°C	7 days 4 days 2 day
Time Between Coats @ 20°C @ 35°C @ 45°C	15 hours 12 hours 8 hours
Toxicity (BS 6920 Part 1) Odor Color Change (max. 1%) Flavor Turbidity (max. 5) Dissolved O ₂ Heavy Metals Chemical Analysis Toxic Organic Compounds Bacterial Growth	None discernible <1% None discernible <1 Pass Pass Pass None detected None detected
Bond Strength (ASTM D 4541) Steel Concrete	3.5 MPa 1.5 MPa
Tensile Strength (ASTM D 412)	6 MPa
Tear Resistance (ASTM D 1004)	13 N/mm
Elongation (ASTM D 412)	40 %
Shore D hardness (ASTM D 2240)	50
Abrasion Resistance (ASTM D 4060-95, CS-17 Wheel 500 gm load)	100 cycles: 10-15 mg 500 cycles: 70-75 mg 1000 cycles: 90 mg
Resistance to Hydrostatic Pressure (DIN 1048) Positive DIN 1048 Negative	> 13 bar > 10 bar
Crack Bridging Capacity (ASTM C 386:2005)	Comply
Water Vapor Transmission Rate (ASTM E 96-80)	0.8-1.3 g/m ² /day
Water Vapor Resistance	1.6-2.6 x10 ⁵ MNs/g
Low Temperature Flexibility (0.25 mm coating) ASTM D522	Pass at -5°C
Service Temperature after full cure: Dry Condition Wet Condition	-2°C up to 80°C -2°C up to 65°C

COVERAGE • Application rate will vary according to surface conditions, application technique and job conditions. A coverage rate of 2.5 m²/liter at 400 microns DFT per coat is dominant.

SURFACE PREPARATION • All surfaces should be clean, dry and free from dust and other contaminants. Wet substrates should be sponge dried to remove all free surface water then air dried. Treat oil or grease contamination with degreaser followed by water or steam cleaning. The substrate must be fine textured since *FlexCrete 400* is applied in a thin coat.

New concrete floors: should be at least 28 days old and have a moisture content of less than 5%. The relative humidity at the surface should not be more than 25% as per BS8201:1981. Excessive laitance should be removed by mechanical methods. Dust and other debris should be removed by vacuum cleaning. Any fine cracks or pin holes should be covered with *MortCrete 3000* or other epoxy-based mortar.

Old concrete floors: damaged areas or surface irregularities should be repaired using *MortCrete 3000* or other epoxy-based mortar.

Steel surfaces: should be grit blasted to surface quality SA 2 ½ and primed with a single coat of *EpoPrime 100* or other epoxy primer. The lining work should be scheduled so that newly cleaned steel is coated as soon as possible before the formation of rust.

Epoxy Screeds: high spots or trowel marks should be rubbed down. Remove dust and debris by vacuum cleaning.

MIXING • The entire contents of the hardener container should be poured into the base container, taking care to scrape the hardener container clean. The two materials must be mixed thoroughly for at least 3 minutes and until a uniform color and consistency are obtained. Use a heavy duty slow speed power drill with a jiffy mixing blade. Care should be taken to scrape the sides and bottom of the container with the mixer. Do not add solvent thinners at any time.

APPLICATION • After mixing, *FlexCrete 400* should be immediately applied to the surface ensuring a continuous coating of uniform thickness is obtained. A stiff nylon brush or short nap roller is recommended for such application. For faster rates of application use an airless spray. The second coat can be applied as soon as the first coat has dried (4 - 6 hours) depending on the ambient and surface temperature. *FlexCrete 400* must be applied at a minimum total dry film thickness (DFT) of 400 microns.

For high build film thicknesses up to 2.0 mm, use a fiber mesh between coats. The fiber mesh should be applied to the first coat while still wet.

CLEANING • Tools and equipment must be cleaned with an organic solvent.

STORAGE & SHELF LIFE • Product should be stored at 25°C in dry conditions away from direct sun light. Shelf life is approximately 12 months from date of purchase in original unopened container at specified storage temperature.

SAFETY PRECAUTIONS • Non-flammable material. The application of material should be under good ventilation. Avoid inhalation of the vapors. Use goggles and vinyl gloves. In case of contact with eyes, rinse immediately with plenty of clean water, do not use solvent and seek medical attention immediately.

The product complies with environmental and occupational health & safety standards ISO 14001 and OHSAS 18001.

PACKAGING • 10 liter packs (includes hardener and base components).

Creative Concrete Concepts

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