

## Epoxy Polysulfide Waterproofing Coating

**DESCRIPTION** • *FlexCrete 500* is a two-component, protective, flexible, epoxy polysulfide-based elastomeric coating with excellent chemical and abrasion resistance. The inclusion of polysulfide polymers into the backbone of the epoxy chain prevents the age hardening and rigidity of epoxy coatings. *FlexCrete 500's* superior adhesion strength and crack bridging ability make it an ideal coating for waterproofing and crack isolation where also high chemical resistance is needed.

**USES** • *FlexCrete 500* was formulated for applications where high chemical resistance is required, such as sewage tanks, silos, manholes, waterproofing of pile heads, basements, and other above and below ground structures. When silica aggregates are sprinkled over the surface of the wet coating, *FlexCrete 500* is also ideal as a crack isolation and waterproofing membrane below other finishes such as terrazzo and swimming pool plaster. Embedding of fiberglass mesh in the *FlexCrete 500* coating enhances the crack isolation and tensile strength properties of the system.

### ADVANTAGES

- ✓ No primer is required.
- ✓ Solvent free.
- ✓ Liquid applied.
- ✓ Provides a seamless coating.
- ✓ Resistant to a wide range of chemicals.
- ✓ Flexible with crack bridging ability up to 2 mm.
- ✓ 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 500* is only a fine coating; it should not be used to fill cracks or holes in the surface. *FlexCrete 500* must be applied at a minimum dry film thickness (DFT) of 500 microns.

### PHYSICAL PROPERTIES

Mixed Specific Gravity	1.35 ± 0.05
Volume Solids	100%
Pot Life @ 25°C	50 ± 5 mins.
Tack Free Time @ 25°C	5 - 6 hrs.
Tensile Strength (ASTM D 412)	8.4 N/mm <sup>2</sup>
Elongation (ASTM D 412)	35%
Shore A Hardness (ASTM D 2240)	50

Tear Resistance (ASTM D 1004)	14 N/mm
Bond Strength (ASTM D 4541)	
Concrete	2.0 MPa (Concrete Failure)
Steel	3.5 MPa
Abrasion Resistance (ASTM D 4060-95, 1000 cycles)	80 mg
Water Permeability - Max. Depth of Water Penetration	0 mm
Resistance to Hydrostatic Pressure (DIN 1048)	
Positive	> 15 bar
Negative	> 12 bar
Crack Bridging Capacity (BSEN 1062-7)	0.5 mm
Service Temperature After Full Cure	
Dry Condition	-2°C to 80°C
Wet Condition	-2°C to 65°C

**CHEMICAL RESISTANCE** • Fully cured *FlexCrete 500* samples have been tested for chemical resistance and found to have no discoloration, change in gloss, blistering, softening, or swelling to the following materials:

- Sea water
- Sewage water
- Butanol
- Ethyl Acetate
- Propanol
- Toluene
- Xylene
- Citric acid 5%
- Citric acid 20%
- Acetic acid 5%
- Tartaric acid 10%
- Waste food stuff
- Starch solution 5%
- Ammonia 0.88

**COVERAGE** • Application rate will vary according to surface conditions, application technique and job conditions. A coverage rate of 2 m<sup>2</sup>/liter at 500 microns DFT 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 500* is applied in a thin coat.

## FlexCrete 500 Epoxy Polysulfide Coating

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 500* 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 500* must be applied at a minimum total dry film thickness (DFT) of 500 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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