

4553™ Epoxy Coating

Protective Coating for Sanitary Sewer Structures



DESCRIPTION

The 4553™ Epoxy Coating is a 100% solids, Cyclo-aliphatic amine, polyamine and amine cured epoxy coating designed to protect and control the deterioration of severely exposed concrete (brick) sewer manholes, lift station concrete, junction boxes, pipes, storm water corrugated steel (CMP) culverts and other structures; and steel tank components used in secondary containment applications. The moisture tolerant 4553™ Epoxy Coating (EC) provides adhesion, abrasion and temperature resistance.

USES

- Sanitary Sewer Manholes
- Concrete and Sewer Pipe Coatings
- Concrete Bottoms in Fiberglass Structures
- Secondary Containment
- Water Treatment Plant Structures
- Chemical Spill Resistance
- Steel Tank Components

CLASSIFICATION

Polymer, polyamines and Cyclo-aliphatic amine.

COLOR: Glossy. Light gray color.

COVERAGE: 1604 ft² per gallon at 1.0 mil dry.

DRY FILM THICKNESS:

Steel: 15 to 20 mils DFT.
Concrete: 80 to 250 mils DFT.

SURFACE PROFILE:

1-3 mils for Steel
CSP 3 to CSP 5 for Concrete

POT LIFE: 1-gallon is 25-minutes at 77°F.

DRY TIME: Recoat 4 to 6 hours at 70°F.
Maximum strength at 8 hrs at 70°F.
Maximum resistance at 3-days.
Final cure in 7-days

PROTECTION:

Provides corrosion protection against sulfuric acid, chlorides, sodium hydroxide, detergent, diesel fuel, gasoline, hydraulic fluid, bleach and oils in harsh environments; including chemical spill applications. Resists hydraulic abrasion.

Self-priming may be applied over epoxy and zinc based primers and top-coated with a UV weather resistant catalyzed acrylic epoxy for UV-exposure protection.

APPLICATION

The two-component 4553™ Epoxy Coating is designed for plural component equipment (and hand) application. Preheating the EC components will reduce viscosity. Over heating continues to reduce viscosity. Thicker applications, high ambient temperatures and larger quantities will shorten pot life. Use MEK solvent for cleaning. Thinning is not required. Contact your local sales representative for technical support.

TECHNICAL INFORMATION

Property	psi	
Compressive Strength ASTM D 695	28-day	10,694
Tensile Strength, Type I ASTM D 638	4,583	
Elongation (%)	26	
Flexural Strength ASTM D 790	7,730	
Adhesion Strength, Type IV ASTM D 4541 Steel Panel Concrete	1,216	Substrate failure
Hardness, Shore D ASTM D 2240	83	
Vapor Transmission ASTM D 1653	<0.4158 grains/ ft ² / h	
Chemical Resistance: ASTM G 20		
60% Sulfuric Acid:	No Effect	
Phase	<u>Blistering</u>	<u>Color Change</u>
Vapor:	No	No
Reagent:	No	Moderate
Exposure Vapor Phase		No Effect
Chloride, 1%		IV
Hydrochloric Acid, 30%		IV
Caustic Solution Immersion		Good
Abrasion Resistance ASTM D 4060 1K grams@1K cycles	241.6 mg	
Edge Retention	Good	

*IV – Immersion, vapor.

REPAIR PROCEDURE

Remove loose or broken concrete. Scrub and wipe the repair area with Methyl Ethyl Ketone and wipe dry. Roughen the surface with emery cloth, sandblast or wash with LG-68 Chemical Detergent. Clean again with MEK and apply the 4553™ EC. Refer to the manufacturer's product specifications for details.

APPLICATOR EQUIPMENT

(Non-plural applicators)

Airless	Graco or equal
Fluid Pump	45:1 or higher
Fluid Hose	3/8" ID or larger
Tip (min)	.019 or larger Reverse clean
Air Source	Continuous inbound 80 to 100 psi pressure at the pump.

Apply by short hair or natural bristle brush or 3/8" or longer synthetic nap roll.

MIXING INSTRUCTIONS

NON-PLURAL APPLICATORS - mix the components in separate original containers. While mixing slowly pour in the activator; continue mixing for 3 minutes using mechanical means. No induction period is required.

SURFACE PREPARATION

Steel service: Clean steel surface free of dirt, oil and contaminants.

Mild: Hand or power tool clean to obtain a SSPC 2 or 3 profile clean surface.

Moderate: Commercial blast clean to obtain SSPC 6 profile.

Corrosive: Near white or white metal blast to obtain SSPC 10 or SP-5 near white or white metal blast clean.

Concrete service: Abrasive blast new and old surfaces down to sound concrete. Blow the surface free from dust and dry damp surfaces with clean dry air prior to applying the EC or use LG-68 heavy duty concrete cleaner. CSP 3 to CSP 5

CURING

Effective curing depends upon specific cases. Acceptable substrate temperatures range from above freezing or 45° F to 140° F maximum. The surface temperature should be at least 5° F above the dew point.

EQUIPMENT

The equipment shall be a Sewer Manhole Master™ Epoxy Spray Pump or meet the manufacturer's requirements.

PACKAGING

The 4553™ Epoxy Coating is available in 50-gallon drums, 5-gallon pails, or 1.5-gallon kits.

STORAGE

Shelf life is one year under dry conditions at 70° F.

SAFETY

May cause skin and eye irritation. Avoid prolonged contact and breathing of vapor. If swallowed, do not induce vomiting. In case of eye contact, flood with water and see a Physician immediately. Keep away from open flame. Close container after use. Refer to the Safety Data Sheet for details.

WARRANTY INFORMATION

The Manufacturer offers this information for the user's consideration. The corporation warrants this product to be of good quality and free from material defects as specified. If failure occurs within the specified period, it will be determined upon inspection of each application. "Failure" does not include consequential damage resulting from mechanical or chemical substance maltreatment not customarily used in connection with normal use of the structure, or act of God. Report all product failures within 30-days from the application date. The manufacturer's liability and sole obligation and the Buyer's single remedy in connection with the product shall be limited, at its option, to either replacement of the product not conforming to this warranty only or credit to Buyer's account in the amount of the invoiced product. The Manufacturer reserves the right to determine whether any claim is specifically related to another cause. The corporation makes no other warranties, either expressed or implied and in no event intends to infringe on any established patents or trademarks. © All rights reserved 2011.

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