



**PERMOX PCS-9043 TYPE II
GLASS FLAKE EPOXY
PIPE COATING**

DESCRIPTION: PCS-9043 TYPE II PIPE COATING is a high-build glass-flake epoxy coating specifically designed for use on concrete, ductile iron, steel pipe and related equipment. It is self priming and epoxy modified to produce thick films up to 50 mils dry film thickness in a single coat, where required. In field work, this product may be applied over damp surfaces and concrete with a moisture content of up to 26% at temperatures as low as 35°F, with unaffected chemical resistance and durability upon reaching full cure. When used in shop application, PCS-9043 TYPE II PIPE COATING provides easy application, outstanding adhesion, and recoat times as soon as 2 hours minimum.

USES: PCS-9043 TYPE II PIPE COATING can be used as an interior and exterior coating for pipe in industries such as chemical processing, pulp and paper, marine, water and sewage, offshore drilling, nuclear energy, textile, petroleum, and others. The high performance polyamine epoxy resin and laminar glass flake combine to produce a very tight, compact film with excellent abrasion and chemical resistance. The plate-like formation of glass-flake produces a paint film of 0.0 perms when tested for six(6) weeks per ASTM E 96-66, procedure A. The plate-like structure of glass flake in the cured film also provides superior coverage of irregular surface profile thus producing a holiday-free coating at lower film build when compared to coal-tar epoxies.

PCS-9043 TYPE II PIPE COATING meets or exceeds all the requirements of the Corps of Engineers Specification C200; Steel Structures Painting Council Specification SSPC-PT-16; AWWA C-210-84 liquid epoxy system for interior and exterior of steel water pipes; and DOD-P-23236(SH) Type I, Class I, Type III, Class I.

SURFACE PREPARATION:

Steel:

Non-Immersion Service: Solvent clean per SSPC-SP1 to remove all oil, grease, and loosely-adhering deposits. Abrasive blast per SSPC-SP6 to remove all rust, mill scale, dust, and other surface contaminants per SSPC-VIS-1-89.

Immersion Service: Solvent clean per SSPC-SP1 to remove all oil, grease, and loosely-adhering deposits. Abrasive blast per SSPC-SP10 near-white conditions per SSPC-VIS-1-89.

Primer: None required. PCS-9043 TYPE II PIPE COATING has excellent adhesion to steel.

CONCRETE PIPE and MANHOLES:

Brush blast to remove surface contaminants and roughen surface. Bug holes opened in the blasting process should be filled before coating.

Primer: None required.

VOC: .8 lbs. per gallon

COLORS: Standard Colors Available

GLOSS: 60° Glossmeter: 80+

SUGGESTED FILM THICKNESS: 12 to 60 mils depending upon service.

VOLUME SOLIDS: 92% ± 2%

THEORETICAL COVERAGE: 1475 sq. ft. per gallon @ 1 mil

NUMBER OF COMPONENTS: Two

MIXING RATIO: 4 to 1 by volume

POT LIFE: 1 hour when not reduced. 4 hrs. @ 77°F when reduced to spray (shorter at higher temperatures) .

APPLICATION Temperature: 35°F - 120°F

DRY TIME: To touch, 2 - 4 hrs. @ 77°F; full cure 7 days @ 77°F

SERVICE TEMPERATURE: Up to 300°F dry, up to 180°F wet depending upon service.

RECOAT: 2 hours minimum - 7 days maximum; longer period will result in poor intercoat adhesion. **Consult Permite.**

REDUCER AND CLEAN-UP: #76 Reducer.

PACKAGING: 5 gallon kits.

SHELF LIFE: 12 months in unopened containers.

DO NOT STORE ABOVE 90°F.

DUCTILE IRON: Abrasive blast to remove all loosely-adherent oxides and foreign materials which would adversely affect the coating adhesion. Since some oxides present after the manufacture of ductile iron pipe are so tightly adhered to the surface that they actually become an integral part of the pipe, the extent of abrasive blasting should be sufficient to remove loosely-adherent oxides but not those that are tightly adhered. The intent is to determine that the entire surface to be coated is struck by the blast media.

Primer: None required.

MIXING: At temperatures higher than 80° F, refer to above paragraph on pot life to determine quantity to be mixed. DO NOT MIX MORE THAN CAN BE USED IN A 3 HOUR PERIOD FOR SPRAY APPLICATION, OR IN 1 HOUR FOR BRUSH APPLICATION.

Mix 4 gallons of BASE with 1 quart of REDUCER #76 until uniform with power mixer, then add in 1 gallon of HARDENER. Continue mixing for 3 minutes minimum, scraping sides of mixing container occasionally to ensure that all of the BASE component is thoroughly mixed in.

APPLICATION: Brush, roller, or spray. Do not use nylon or plastic equipment.

Spray Equipment: Conventional Spray

Pump-Graco Mogul (8:1) or equal
 Pressure: Material – 30 to 55 psi
 Atomization – 50 to 90 psi
 Fluid Tip – 1/8" to 1/4"
 Atomizing tip – 3/16" (external wing)
 Hose – 1/2" i.d to 50 ft.
 3/4" i.d. for over 50 ft.
 Maximum working pressure – 750 psi
 Maximum burst pressure – 3000 psi

Airless Spray

Pump-Graco Bulldog (30:1) or equal
 Line Pressure – 70 to 90 psi
 Tip – 23 to 31 thousandths, reversible
 Tip Filter – none
 Manifold filter – none or 30 mesh
 Hose – 3/8" i.d., high pressure, 50 ft or less
 1/2" i.d., high pressure, for over 50 ft. with 3/8" H.P. Whip end hose.

HOLIDAY DETECTION: Holiday detection is recommended. Use a high voltage detector such as a Tinker and Razor AP/W .9 to 3.5 KV Dry Detector.

CATHODIC PROTECTION: PCS-9043 TYPE II PIPE COATING is compatible with conventional cathodic protection.

CHEMICAL RESISTANCE

PCS-9043 TYPE II PIPE COATING is hydrophobic which accounts for the ability of the coating to displace moisture from the surface being coated. Most ambient temperature curing agents for epoxy coatings are either partially soluble in water or are easily emulsified so that effective cure in the presence of water is not possible. Except for a minor reduction in rate of cure, PCS-9043-TYPE II PIPE COATING is unaffected under the same circumstances.

The most common cause of coating failure is not the lack of chemical resistance. Usually failures can be traced to inadequate surface preparation or to application under less than ideal conditions. PCS-9043 TYPE II PIPE COATING has been designed to minimize the importance of surface preparation and ideal application conditions for all types of service, except immersion. The stresses of immersion service are so great that the best surface preparation possible must be specified; however, even with less than ideal preparation, the excellent wetting properties and inertness to water of PCS-9043 TYPE II PIPE COATING will result in better performance than is possible with other coatings.

PCS-9043 TYPE II PIPE COATING is suitable for immersion service at 77°F in the following:

Acetic Acid,	5%	Hydrogen Peroxide,	5%
Aliphatic Hydrocarbons		Phosphoric Acid,	10%
Phosphoric Acid	10%	Sodium Sulfite,	1%
Calcium Chloride		Potassium Alum	
Citric Acid,	20%	Sodium Carbonate	
Distilled Water		Sour Crude Oil	
Gasoline		Sulfuric Acid,	50%

PCS-9043 TYPE II PIPE COATING is suitable for elevated temperature immersion service in the following:

Black Liquor	160°F	Sea Water	180°F
Deionized Water	160°F	50% Sodium Hydroxide	120°F
Distilled Water	180°F	Tap Water	180°F
Green Liquor	160°F	White Liquor	160°F
Hydraulic Fluid	110°F		

PCS-9043 TYPE II PIPE COATING is suitable for spillage conditions at room temperature for the following:

Ammonium Hydroxide,	20%	Hydrochloric Acid,	20%
Butyl Alcohol		Nitric Acid,	20%
Calcium Hypochlorite,	10%	Phosphoric Acid,	30%
Carbon Tetrachloride		Sodium Hypochlorite,	10%
Citric Acid,	25%	Sulfuric Acid,	85%
Ethyl Acetate		Toluene	
Ethyl Alcohol		Xylene	

CAUTION:PCS-9043 TYPE II PIPE COATING hardener is corrosive. Components of this product, when combined, may be skin irritants and/or skin sensitizers. Rubber gloves should be worn to minimize skin contact. Practice caution and good personal cleanliness to avoid skin and eye contact. Avoid breathing vapors of heated material.

See material safety data sheet for full precautions prior to use.

If swallowed, do not induce vomiting. Call a physician immediately. For eye contact, flush with water; if irritation persists, seek medical attention. In case of skin contact, wash thoroughly with soap and water.

PCS-9043 TYPE II PIPE COATING is intended for INDUSTRIAL USE ONLY.

Manufacturing and Executive Offices:

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