Permite

high performance coatings and linings

Engineered Chemical Coatings Since 1921

PCS-9043 TYPE II FINISH
HIGH BUILD EPOXY

DESCRIPTION: PCS 9043 TYPE II FINISH is a high-build, glass-filled epoxy coating specifically designed for application over steel and concrete subjected to harsh environmental conditions. In remedial work, this product may be applied over damp or poorly prepared surfaces at temperatures as low as 35^0 F with unaffected chemical resistance and durability upon reaching full cure. When used in conjunction with PERMOX 9043 TYPE II PRIMER and shop-applied over blasted steel, PERMOX TYPE II FINISH provides easy application, excellent adhesion, and "turn time" as short as 2 hours with recoat times of 2 to 4 hours.

USES: Especially suited for pulp and paper mills, chemical plants, power generation facilities, mining operations, marine applications, tank linings and other immersion service.

POT LIFE: Working pot life when mixed is 3 hours maximum at 77^0 F when reduced for spray or 1 hour for brush application. At higher temperatures, the pot life of the material is drastically reduced (by approximately 1 to 1¼ hours for every 10 degrees increase in temperature). It has been found that packing ice around the mixed material will extend the pot life. Cure time is 4-6 hours to touch with significant toughening of the film overnight and full cure in 72 hours (at 77^0 F).

MIXING: At temperatures higher than 80^0 F, refer to the above paragraph on pot life to determine quantity to be mixed. DO NOT MIX MORE THAN CAN BE USED IN A 2 HOUR PERIOD FOR SPRAY APPLICATION, OR IN 1 HOUR FOR BRUSH APPLICATION.

Mix 4 gallons of BASE with 1 quart of reducer (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 insure that all of the BASE component is thoroughly mixed in.

VOC: .8 lbs. per gallon

COLORS: Standard Colors Available

GLOSS: 60^0 Glossmeter: 80+

SUGGESTED FILM THICKNESS: One or two coats @ 5-7 mils DFT.

VOLUME SOLIDS: 94% ± 2%

THEORETICAL COVERAGE: 1507 sq. ft. per gallon @ 1 mil

NUMBER OF COMPONENTS: Two

BOND STRENGHT: Sandblasted steel: 2000 psi; Concrete: stronger than concrete when used over PERMOX 9043 TYPE II PRIMER

MIXING RATIO: 4 to 1 by volume

pH TOLERANCE: 2 to 13 @ 77^0 F

POT LIFE: 3 hrs. @ 77^0 F (shorter at higher temperature) when reduced to spray. 1 hour when not reduced.

APPLICATION Temperature: 20^0 – 140^0 F dry. 35^0 – 120^0 F wet.

*** DRY TIME:** To touch, 2 hrs. @ 77^0 F, full cure 3 days @ 77^0 F

SERVICE TEMPERATURE: 300^0 F Dry, 180^0 F Wet.

RECOAT: 2 hrs. minimum to 6 months max.

REDUCER AND CLEAN-UP: #76 Reducer.

PACKAGING: 5-gallon kit.

SHELF LIFE: 12 months in unopened containers. DO NOT STORE ABOVE 90^0 F

* Fume Exposure resistant immediately upon application; overnight for most splash/spillage.

Manufacturing and Executive Offices:
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SURFACE PREPARATION: Apply over proper surface preparation and suitably-primed surfaces. Consult **Permite** for specific recommendations.

APPLICATION: Flush all equipment thoroughly with REDUCER #76 before use. **Airless:** minimum of 30:1 pump ratio, .019-inch tip with 3/8" I.D. minimum fluid line. Adjust fluid pressure for proper atomization. Higher pump ratio and/or larger diameter lines may be required when more than 50 ft. of material line is required. Shield long lines from direct sunlight in hot weather. **Conventional Spray:** Devilbiss MBC or JGA gun with 78 to 765 air cap, E fluid tip and nozzle. Use a pressure material pot with separate atomizing air and fluid pressure regulators; 50-70 psi atomizing air and 10-15 psi pot pressure.

For most applications, 1 coat at 5-7 mils is sufficient on primed substrates; where time is important, 10-15 mils DFT can be applied in one application by using multiple passes and a cross-hatch pattern.

When used as a primer or seal coat for masonary surfaces, PERMOX 9043 TYPE II FINISH may be reduced up to 25% by volume with REDUCER #76 to facilitate penetration into crevices and voids. At 75^0 F, the tack-free time will be 2-3 hours with considerable toughness developing overnight and about 3 days required for full cure. At 35^0 F, overnight is required for tack-free conditions, 3-5 days for significant toughness and 10-14 days for full cure.

CHEMICAL RESISTANCE

PERMOX 9043 TYPE II FINISH HARDENER is hydrophobic and this 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 the effective cure in the presence of water is not possible. These curing agents also react with carbon dioxide in the atmosphere to produce the "blush" associated with epoxy systems under wet and/or cold conditions. Except for a minor reduction in rate of cure, PERMOX 9043 TYPE II FINISH is unaffected under these same conditions.

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 FINISH has been designed to minimize the importance of surface preparation and ideal application conditions for all types of service, except for 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 FINISH will result in better performance than is possible with other coatings.

PERMOX 9043 TYPE II FINISH is suitable for immersion service at 77^0 F in the following:

Citric Acid	10%	Sea Water	
Sulfuric Acid	50%	Tap Water	
Phosphoric Acid	10%	Sodium Sulfite	1%
Hydrogen Peroxide	5%	Zinc Hydrosulfite	1%
Distilled Water		Gasoline	
Acetic Acid	5%	Sour Crude Oil	

Immersion service at elevated temperatures:

50% Sodium Hydroxide	120^0 F	Green Liquor	160^0 F
Distilled Water	180^0 F	White Liquor	160^0 F
Sea Water	180^0 F	Deionized Water	160^0 F
Tap Water	180^0 F	Hydraulic Fluid	110^0 F
Black Liquor	160^0 F		

Spillage conditions at room temperature:

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

The service temperature of PERMOX 9043 TYPE II FINISH is 300^0 F dry and 180^0 F wet. It is extremely well suited for use on steel and concrete in corrosive conditions and where ideal surface preparation is not possible and/or where cold, humid or wet conditions exist.

WARRANTY: PERMITE warrants that the BASE and HARDNER for PCS 9043 TYPE II FINISH will be identical in chemical and physical properties from batch to batch within the specification limits of the raw materials used in their manufacture.

CAUTIONS: PERMOX 9043 TYPE II FINISH **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 persist seek medical attention. In case of skin contact, wash thoroughly with soap and water.

PERMOX 9043 TYPE II FINISH is intended for INDUSTRIAL USE ONLY.

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