ChemProof Polymers

PERMACOAT 4000 HT

For Protection Against Industrial Chemicals

DESCRIPTION

PERMACOAT 4000 HT is a 100% solids modified epoxy coating/ lining system, ideally suited for ideally suited for high temperature applications commonly found in many manufacturing processes. PermaCoat 4000 HT is designed to withstand constant temperatures to 212° F (100° C) and intermittent exposures to 250° F (122° C).

TYPICAL APPLICATIONS

- Process floors
- Containment basins
- Trenches
- Sumps
- Tank bases
- Any area in general where harsh chemicals at elevated temperatures are used

FEATURES

PERMACOAT 4000 HT allows for a fast application where outstanding chemical, heat and wear resistance are required. PERMACOAT 4000 HT can be installed over most sound floors including old or new concrete, most types of repair mortars and steel structures. At varying thicknesses, the PERMACOAT 4000 HT system provides long term chemical resistance for splash and spill, or immersion in a wide range of chemicals above normal ambient temperatures. Every chemical acts differently at elevated temperatures, therefore please contact ChemProof Polymers for specific recommendations.

OTHER FEATURES INCLUDE:

- Rapid cure resulting in minimal downtime
- 100% non-porous
- Odor free
- Non-skid safety finish
- 100% Solid by volume
- 0 VOC as supplied by manufacturer

TYPICAL PROPERTIES

Solids, by Volume	100 %
Compressive Strength ASTM C579	15,000 psi
Flexural Strength ASTM D790	17,000 psi
Tensile Strength ASTM D307	11,300 psi
Bond Strength to Concrete ASTM D4541	Exceeds tensile strength of concrete. Failure in concrete
Taber Abrasion ASTM D4060 CS 17 Wheels	Loss/1000 cycles =25 mg
Water Absorption ASTM D413	0.10% Maximum

PACKAGING AND COVERAGE

PERMACOAT 4000 is available in 1- and 3-gallon units. The coverage rate is appx. 64 sq ft at 25 mils with the theoretical coverage being 1604 sq ft at 1 mil.

CURE TIME

The cure time of PERMACOAT 4000 HT and other resinous systems are very dependent upon the temperature of the substrate. The ambient temperature may not be the same as the substrate temperature. For example, during winter concrete may be colder than the surrounding ambient temperature. As temperatures during the day may increase, large masses of concrete will be much slower to react. During summer days direct sunlight will increase the concrete temperature over that of ambient air. The substrate temperature should be monitored and remain at or above 60° F.

Service (hours)	65°F	75°F	90°F
Foot Traffic	14	10	8
Light Chemical	12	10	10
Forklift	36	24	12

**Where heavy chemical abuses are anticipated, longer cure times may be required. Contact ChemProof Polymers or the local distributor for specific recommendations. These times are after the final coat has been applied.*

SURFACE PREPARATION

NEW CONCRETE – The concrete should be well cured for a minimum of 10 (ten) days, per ACI 308-81, (R-1986), clean, dust-free and free of all contaminants. Mechanical methods such as sandblasting, scarifying or shot blasting should be employed to remove the weak layer of surface laitance. A minimum tensile strength of 200 psi is required of the prepared surface. Acid etching with muriatic acid is acceptable but less desirable. Care must be taken to completely remove all residual acid prior to the application of PERMACOAT 4000 HT.

EXISTING CONCRETE – Concrete must be structurally sound and free of all contaminants. Weak or contaminated concrete must be removed until sound concrete is realized. Old coatings, toppings, waxes, oils, etc. must be removed prior to the application of PERMACOAT 4000 HT.

MIXING

Prior to application, the PERMACOAT 4000 HT (Resin, Hardener and Silica) and the substrate should be between 65 degrees F and 90 degrees F.

Premix the Part A (Resin) for appx. 30 seconds with a Jiffler type mixer prior to adding the Part B (Hardener). After adding Part B mix for an additional 1 minute before pouring onto the substrate.

APPLICATION METHODS

Basic Broadcast
In order to achieve a 60 mil system, apply a 22 mil (73 sq ft/gal) basecoat and for a 125 mil system, apply a 48 mil (34 sf/gal) basecoat. Within 20 minutes of the basecoat being applied broadcast to excess using a 20/40 mesh silica. Once the basecoat is cured, apply a 10-16 mil topcoat utilizing squeegees and short nap paint rollers. PermaCoat 3000 Primer is recommended for both the 60 and 125 mil systems.

Basic Broadcast Reinforced
A 1.5 oz chopped, or a fiberglass scrim cloth can be added to the basecoat of the 125 mil system prior to the silica broadcast. PermaCoat 3000 Primer is recommended.

Note: The above systems have their vertical rolling counterparts.

STORAGE and SHELF LIFE

PERMACOAT 4000 HT should be stored at 50-90° F out of direct sunlight. All containers should remain unopened until ready for use. If stored as set out above, PERMACOAT 4000 HT has a minimum shelf life of one year.

WHERE PERMACOAT 4000 HT SHOULD NOT BE INSTALLED

PERMACOAT 4000 HT should not be applied over substrates:

- subject to extreme hydrostatic pressure
- which are unsound
- which are contaminated and cannot be cleaned.
- at temperatures below 60° F (Consult ChemProof Polymers).

SAFETY

Read Safety Data Sheets ("SDS") before using. PERMACOAT 4000 HT contains blended Epoxies as the resin and blended Amines as the hardener. Protective clothing and gloves are recommended to prevent sensitization to these materials. In case of ingestion or eye contact, it is advisable to contact a physician immediately. SDS are available for this product upon request.

WARRANTY

ChemProof Polymers, Inc. warrants our products to be free of manufacturing defects in accord with applicable ChemProof quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by ChemProof Polymers, Inc. No other warranty or guarantee of any kind is made by ChemProof Polymers, expressed or implied, statutory, by operation of law or otherwise, including merchantability and fitness for a particular purpose.

The full product warranty is available at www.chemproof.com.

CLEAN-UP

All mixing and application equipment should be cleaned immediately after use. If this is done, soap and water or biodegradable cleaners can be used. If the material has begun to set, more aggressive solvents will be necessary. Before using solvents, refer to their respective SDS for handling considerations.

RELATED & ANCILLARY PRODUCTS

PERMACOAT 3000
Epoxy Floor Coating/Topping

PERMACOAT 5000
Modified Epoxy Floor Coating/ Topping

PERMAGROUT E
Epoxy Grout/Resurfacer

PERMAFLEX 1100
Flexible Epoxy Underlayment

Related Vertical Products

CONTACT INFORMATION

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