

PERMACAST 4000 HT

EPOXY POLYMER CONCRETE

DESCRIPTION

PERMACAST 4000 HT is a 100% solids epoxy polymer concrete designed for placement in forms or by casting in corrosion resistant applications such as pump pads, curbing, trench linings, piers, sumps, floors, etc.

The PERMACAST 4000 HT system consist of three components, resin, hardener and graded aggregates as needed for the specific application.

FUNCTION

PERMACAST 4000 HT exhibits excellent chemical resistance to 70% sulfuric acid, concentrated hydrochloric acid, 50% sodium hydroxide and a wide range of other acids, alkalies and solvents.

Typical applications include foods processing plants, breweries, chemical processing plants, waste disposal facilities, pulp and paper mills, refineries, mines, chemical storage areas and other industrial processing areas where chemicals are used.

TYPICAL APPLICATIONS

- Trenches
- Collection Sumps
- Pump Pads
- Tank Bases
- Process Floors
- Curbs

FEATURES

PERMACAST 4000 HT is a 100% solids system which exhibits virtually no shrinkage while maintaining superior impact and abrasion resistance.

PERMACAST 4000 HT can be cast on horizontal floor areas or it may be poured into forms for vertical areas or part casting. It is recommended to vibrate vertical forms to reduce any air entrapment

The physical properties of the PERMACAST 4000 HT system are 3-4 times that of standard Portland cement concrete

Other features include:

- 100% non-porous
- Oder free
- Non-skid safety finish (optional)

CHEMPROOF POLYMERS, INC.

2750 Charles Page Blvd.

Tulsa, OK 74127-8315

918-584-0364/Fax 0366

chemproof.com

TYPICAL PROPERTIES

Solids, by Value	100%
Compressive Strength ASTM C579-82	12,000 psi
Flexural Strength ASTM C580-85	5,000 psi
Tensile Strength ASTM C307-83	3,000 psi
Shrinkage	nil
Taber Abrasion ASTM C501-80	25 mg loss/1000 cycles w/1000 gms. CS-17 Wheel
Water Absorption ASTM C-413-83	+0.10% Maximum

PACKAGING/COVERAGE

The PERMACAST 4000 HT system is packaged in 2 cubic foot units. Each unit consists of pre measured components, Part A (Resin) and Part B (Hardener) and graded aggregate.

PERMACAST 4000 HT is available in Light Gray, Gray or Black.

CURE TIME

The cure time of PERMACAST 4000 HT, as with most resinous systems, is dependent upon the temperature. The higher the temperature the shorter the working time and set time.

Temperature	75° F
Working Time	25 min.
Initial Set	3 hours
Final Cure	48 hours

MIXING and APPLICATION

The following is a brief summary of concrete preparation and the application procedure for PERMACAST 4000 HT. This information is intended for use in the system evaluation, applicators should refer to the detailed application bulletin for more specific application procedures.

Prior to application of the PERMACAST 4000 HT system the resin, hardener and aggregate should be between 70°F and 90° F.

The working area and surfaces to which the material is to be applied must be dry until the material has “set”.

Premix the Resin (Part A) for 30 seconds using a Jiffler mixer blade attached to a 500-7500 RPM drill. For larger mixes a mortar or epoxy mixer may be used. Add the Hardener (Part B) only when the batch is ready to be applied. Mix for 2-3 minutes. After mixing the resin and hardener add in the aggregate and mix until it is completely wetted out. The material is then ready for placement.

Application

All surfaces to receive the PERMACAST 4000 HT system should be dry and clean of any contamination, including oils, greases, chemicals or debris.

A minimum application thickness of ½ inch is required.

The use of thinners or solvents is not recommended with this product.

When placing in formed curbs or other vertical pour such as castings, vibration is recommended to aid in the release of air voids or bug holes.

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 MSDS for handling considerations.

STORAGE and SHELF LIFE

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

SAFETY

PERMACAST polymers concretes contain 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 contract a physical immediately. MSDS are available for this product upon request.

WARRANTY

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