Epoxy 4000

PRODUCT DESCRIPTION AND USE

Epoxy 4000 is low viscosity, 100% solids resin system used in a variety of flooring applications including high build coatings, aggregate-filled flooring and decorative epoxy pebble applications. This material cures blush-free and provides an outstanding balance of physical strength, flexibility and chemical resistance. Epoxy 4000 has excellent clarity for use over color quartz aggregate and decorative architectural concrete. The pigmented material features high pigment loading for good substrate hide and color consistency when roller applied.

Epoxy 4000 has considerably lower viscosity than most competitive products providing improved handling at cooler temperatures and exceptional troweling characteristics. The lower viscosity allows for the addition of fine silica fillers for easy application of "slurry" type floors. A fast cure hardener is available when cold weather cure down to 40 degrees or accelerated room temperature cure is required.

The versatility of Epoxy 4000 makes it ideal as a primer, finish coat or aggregate binder in a wide variety of flooring applications including manufacturing facilities, warehouses, correctional facilities, loading docks and other areas requiring high performance flooring. Epoxy 4000 is not recommended for food processing areas, commercial kitchens, wineries or other areas that receive constant corrosive exposure.

Chemical Composition
Modified Bisphenol. An epoxy resin cross-linked with aliphatic and cycloaliphatic polyamines.

Colors
Nine standard colors available, plus clear.

Limitations
- Exterior pigmented applications will show chalking

TECHNICAL DATA

Physical Properties
Mixing Ratio by Volume…….2-1
Solid Content by %……100%
Viscosity, cps (Clear Material, 77 degrees)…….250
Pot Life, Regular Cure (77°F, 1 quart mass)…..…….2-3 hours
Dry to Touch……...6 hours
Light Traffic……..16 hours
Full Cure……..7 days

Properties Performance
Tensil Strength, psi (ASTM D-638)……6,230
Ultimate Elongation, % (ASTM D-638)……..11
Compressive Yield Strength, psi (ASTM D-695)……...9,850
Ultimate Compressive Strenth, psi (ASTM D-695)……..19,501
Ultimate Flexible Strength, psi (ASTM D-790)……..9,680
Hardness, Shore D (ASTM D-2240)……83
Bond Strength to Concrete (ACI 503.4-2.3.2.2).....concrete fails before loss of bond

CHEMICAL AND STAIN RESISTANCE (ASTM D-1308 24 HOUR IMMERSION)

Vegetable Oil…….. no affect
Mustard…….no affect
Urine…….no affect
Gasoline……..no affect
Motor Oil…….no affect
Transmission Fluid……..no affect
Brake Fluid…….slight softening, film recovers
Mineral Spirits…….no affect
10% Sulphuric Acid……no affect
10% Hydrochloric Acid……..no affect
10% Acetic Acid…….no affect
Xylene……slight softening, film recovers
MEK……film destroyed

GENERAL INFORMATION

Moisture Vapor Emissions/Alkalinity Precautions
All interior concrete floors not poured over an affective moisture vapor retarder are subject to possible moisture vapor transmission and related high levels of alkalinity that may lead to blistering and failure of the coating system. It is the coating applicator's responsibility to conduct calcium chloride testing to determine if excessive levels of vapor emission or alkalinity are present before applying any coatings. These test kits are available from Garage Sealers. Garage Sealers and it's agents will not be responsible for coating failures due to undetected moisture vapor emissions or related high levels of alkalinity.

Surface Preparation
Concrete must be cured 30 days and be clean, structurally sound, and free of wax, loose paint or curing compounds. Surface must be shot blasted, abraded or acid etched to achieve a minimum of 5 mil profile. If acid etched, use of a floor machine with a nylogrit brush is required. Etched surface must be neutralized with ammonia and water. If surface is prepared by diamond grinding, grind thoroughly to "open up" the surface. Vacuum concrete dust and rinse surface well. Previously coated surfaces must be mechanically cleaned and abraded with steel wool or 80 grit sandpaper. If applied over acid stains, surface must be properly neutralized with ammonia and water.

Mixing Instructions
If using regular cure material, pot life is 35 minutes at 77 degrees. Work time is shortened by higher temperatures. Pouring material on floor immediately after mixing will extend work time. Combining ratio is 2 part A to 1 part B. If using pigmented material, stir Part A well, bringing settled pigments up from bottom of container before adding Part B. Proportion the amounts carefully and mix for 2 full minutes using a low speed drill, scraping the bottom and sides of the mixing vessel.

Handling Precautions
Do not breathe vapors. Use appropriate respirator with green band cartridge to protect against methyl amine vapors. Avoid contact with skin; wear protective gloves. Read Material Safety Data Sheet before using.

Applications Recommendations
Epoxy 4000 must be applied by roller, trowel, or squeegee. When applied as an unfilled system, Epoxy 4000 may be thinned with up to 15% Acetone, MEK, or Glycol Ether EP. If using in aggregate flooring, do not add solvent.

Slip and Fall

OSHA and the American Disabilities Act (ADA) have now set enforceable standards for slip-resistance on pedestrian surfaces. The current coefficient of friction required by ADA is .6 on level surfaces and .8 on ramps. Garage Sealers recommends the use of angular slip-resistant aggregate in all coatings or flooring systems that may be exposed to wet, oily or greasy condition. It is the contractor and end users' responsibility to provide a flooring system that meets current safety standards. Garage Sealers or its agents will not be responsible for injury incurred in a slip and fall accident.