

# 100% SOLIDS EPOXY MORTAR

- Exceptional bond and compressive strengths
- Highly chemical resistant
- High impact resistance
- Water washable

## PRODUCT DESCRIPTION

Custom's 100% Solids Epoxy Mortar is a three-component, water-washable mortar system for installations where exceptionally high strength, chemical and impact resistance is required. 100% Solids Epoxy system's unique makeup produces a mortar with greater bond and compressive strengths and improved chemical and stain resistance over conventional cement or emulsion-based setting systems.

## USES — TILE TYPES

- Vitreous, semi-vitreous or absorptive tile: ceramic, mosaic, quarry, cement
- Impervious porcelain and glass tile
- Brick and mini-brick
- Precast terrazzo
- Natural stone tile including moisture sensitive green and black marble and granite
- Resin-backed stone

## AREAS OF USE

- For floor and wall installations. For best results when used on vertical applications, use with Non-Slump Epoxy Additive
- For Interior use
- For exterior installations with surface temperatures between 60° F (16° C) and 90° F (32° C)
- Industrial, commercial and institutional applications with extremely high mortar strength requirements
- High traffic areas such as airports and shopping malls
- Applications requiring high acid and chemical resistance such as dairies, breweries, bottling plants, bakeries, meat packing plants, pharmaceutical plants and animal hospitals
- Concrete, masonry, plaster
- WonderBoard®, RhinoBoard™ cement backerboards
- Gypsum wallboard (dry areas)
- Exterior grade plywood (interior dry areas)
- Existing ceramic tile
- Sheet vinyl, VCT
- Existing plastic laminate
- Bare carbon steel
- Cutback adhesive

## LIMITATIONS

- Do not bond directly to hardwood, Luan plywood, particle board, parquet, cushion or sponge-back vinyl flooring, metal, fiberglass, plastic and OSB panels.

- Epoxy mortar thickness should not exceed 1/8" (3 mm) after tiles have been beaten in.
- When setting glass tile over 6" x 6" (15 x 15 cm) contact Technical Support for recommendations.
- When setting dimensional stone larger than 12" x 12" (30 x 30 cm) contact Technical Support for recommendations regarding subfloor deflection requirements.
- Temperature will affect the working time of 100% Solids Epoxy Mortar. Hot weather will accelerate curing and shorten working time. Cold weather will slow curing and extend working time. Surface temperatures for installation should be between 60° F (16° C) and 90° F (32° C).
- Not recommended in some manufacturing facilities where heavy solvents are used. Consult Technical Services on questionable installations.

## SURFACE PREPARATION

### General Surface Preparation:

Surfaces must be structurally sound, clean, dry and free from grease, oil, dirt, curing compounds, sealers, adhesives or any other contaminant that would prevent a good bond. Glossy or painted surfaces must be sanded, stripped and cleaned of waxes, dirt or any contaminants. Ambient temperature, surfaces and materials should be maintained at a temperature above 50° F (10° C) or below 100° F (38° C) for 72 hours.

### Cementitious Surfaces:

Concrete or plaster must be fully cured and accept water penetration. Test by sprinkling water on various areas of the substrate. If water penetrates, then a good bond can be achieved. If water beads, surface contaminants are present and loss of adhesion may occur. The contaminants should be removed before installation. Concrete must be free of efflorescence and not subject to hydrostatic pressure. Concrete slabs should have a broomed or brushed finish to enhance the bond. Smooth concrete slabs must be roughened to ensure a good bond.

### Plywood Substrates:

Plywood floors including those under resilient flooring must be built to industry standards. Deflection not to exceed L/360. For questions about proper subfloor installation, call Technical Support.

### WonderBoard® and RhinoBoard™ Backerboards:

As a superior alternative to an additional layer of plywood, WonderBoard or RhinoBoard backerboards may be installed over plywood subfloors. Refer to their respective data sheets for installation information.



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BUILDING PRODUCTS

### Existing Ceramic Tile, Resilient Flooring or Plastic Laminates:

Plywood flooring must be structurally sound and meet all ANSI and deflection requirements. Resilient flooring or plastic laminates must be well bonded, clean and free of all contaminants. Roughen the surface by sanding or scarifying, rinse and allow to dry. Do not sand flooring containing asbestos. For existing well-bonded ceramic tile, mechanically abrade with carborundum stone. Rinse and allow to dry. When sanding we recommend the use of an approved respirator.

### Expansion Joints:

Expansion joints, control joints and cold joints should never be bridged with setting material. They must be brought through the tile work and filled with an appropriate elastomeric sealant.

### Cutback Adhesive over Concrete:

Thick accumulations, powdery, brittle or weak adhesive layers must be removed. Use extreme caution as adhesives may contain asbestos fibers. Do not sand or grind adhesive residue, as harmful dust may result. Use the wet-scraping and wet-sweeping method outlined in the Resilient Floor Covering Institute pamphlet "Recommended Work Practices for Removal of Resilient Floor Coverings". Never use adhesive removers or solvents, as they weaken or soften the adhesive and may cause it to penetrate into the concrete. The remaining residue should be no thicker than a coat of paint and should be almost transparent. Always install an adequate number of properly located test areas.

### MIXING

Empty entire contents of Part A and Part B into clean mixing container and mix thoroughly. Gradually add Part C powder into pre-mixed liquids. Mix by hand or with a low-speed mechanical mixer less than 300 rpm. Mix for two to three minutes or until a smooth trowelable consistency is obtained. Do not overmix or entrap air into mixture. This will shorten pot life and weaken the product.

### APPLICATION

**INSTALLATION TO CONFORM TO ANSI A108.5.** Use proper sized notched trowel to ensure 100% coverage under tiles. Using flat side of trowel, apply skim coat of mortar to the surface. Apply additional mortar with notched side of trowel held at a 45° angle to the surface, combing in one direction. Press tile firmly into place in a perpendicular motion across ridges, moving back and forth. Perpendicular pressing flattens ridges and closes valleys allowing maximum coverage. Adjust tile promptly and beat in with block and rubber mallet. Thickness should not exceed 1/8" (3 mm) after tiles have been beaten in. Periodically pull up a tile and check the back to ensure complete coverage with the adhesive. Do not trowel out more epoxy than can be covered in 10 minutes. If epoxy loses tack, remove and replace with fresh epoxy. If epoxy mortar gets on the face of the tile, clean with warm water and sponge before it sets.

### CURING

Ambient and surface temperatures as well as temperature of the material will affect the cure time of the epoxy. Allow to cure a minimum of 16 hours at temperatures above 70° F (21° C) and 72 hours at temperatures between 60° F and 70° F (16° C and 21° C) before grouting. Generally, light foot traffic can be allowed in 16 hours, normal foot traffic in 24 hours and heavy foot traffic in 72 hours.

### COVERAGE

Approximately 25 - 35 square feet (2.3 - 3.3 m<sup>2</sup>) when applied with a 1/4" x 1/4" x 1/4" (6 x 6 x 6 mm) square-notch trowel.

### CLEAN-UP

Epoxy must be cleaned from tools with water quickly after application. Do not allow epoxy to cure on surface of tile. Do not attempt to work more than one unit at a time. Larger units may require a two or three man crew to spread or clean.

### STORAGE

Keep from freezing.

### SAFETY

**WARNING!** Powder contains free silica. **DO NOT** breathe dust. Dust can irritate eyes and may cause delayed lung injury (Silicosis). Wear a dust mask and rubber gloves when handling. Provide adequate ventilation. Keep containers closed tight when not in use. Handle carefully to keep dust to a minimum. In case of spillage, sweep-up and discard. After using, wash hands thoroughly with soap and clean water before eating, drinking or smoking. If affected by inhaling large amounts of dust, remove victim to fresh air. If eyes are irritated, flush with clean water. **CORROSIVE. KEEP OUT OF REACH OF CHILDREN. DO NOT TAKE INTERNALLY.**

### ORDERING INFORMATION

ITEM CODE	SIZE	COLOR	PACKAGE
SEM	Setting Unit:		Pail
	58 fl. oz. (1.71 L) A	Clear Liquid	Bottle
	35 fl. oz. (1.03 L) B	Amber Liquid	Bottle
	25 lb. (11.34 kg) C	Off White Powder	Bag

### TECHNICAL DATA

Exceeds ANSI A118.3 specifications.

100% SOLIDS EPOXY MORTAR	
Pot Life	1 hour
Open Time	15 minutes
Adjustment Time	30 minutes
Shear Bond @ 28 Days:	
Bisque Tile	≥ 1000 psi (70.3 kg/cm <sup>2</sup> )
Porcelain Tile	≥ 1000 psi (70.3 kg/cm <sup>2</sup> )
Compressive Strength	6500 psi (456.9 kg/cm <sup>2</sup> )

