



# Pro Epoxy

## 100% Solids Epoxy Mortar and Grout

### 2. Manufacturer

Parex USA, Inc.  
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### 3. Product Description

**BASIC USE:** Merkrete Pro Epoxy is a 3-component, 100% solids epoxy compound developed for sanitary applications. Pro Epoxy can be used for setting and grouting ceramic and quarry tile, pavers, mosaics on horizontal and vertical surfaces. Pro Epoxy is an excellent setting material for moisture sensitive and resin backed stones like: black, red and green marbles. Use in commercial breweries, dairies, food processing facilities, distilleries, residential kitchens and bathrooms. It produces a high strength mortar that is stain resistant, impermeable, and shock resistant.

**Features:** Pro Epoxy has exceptionally high chemical resistance to many acids, alkalis, solvents and household stains. It is used in a mortar as thin as 1/16" to 1/8" after tiles have been properly "beat-in." It is water cleanable before curing, nonflammable, and easy to work. Pro Epoxy is not affected by prolonged contact with water, but does not form a waterproof membrane. Use Merkrete Hydro Guard 1 or Hydro Guard 2000 (if a waterproof membrane is required).

Suitable backing, when properly prepared, include plumb and true masonry concrete, and cured portland cement mortar beds, brick, ceramic tile, glass mesh mortar units, steel, glass and fiberglass. Areas of particular use are in industrial plants, particularly chemical and food processing plants such as dairies, breweries, bottling plants, textile and metal finishing plants, where the use of acids, alkalis, solvents, strong detergents and other chemicals cause erosion and damage to the setting beds and grout joints. Other areas include hospitals, restaurants, food preparation areas and similar installations where clinical sanitation is maintained by harsh cleaning and countertops, back-splashes, tub and shower areas, sunken tile tubs and swimming pools requiring a completely waterproof system.

### 4. Technical Data

*Applicable Standards:* Pro Epoxy conforms to requirements for chemical-resistant, water cleanable tile setting and grouting epoxy found in ANSI A108.6 and A118.3.

#### Properties

MERKRETE PRO EPOXY TEST DATA		
Test	Requirement	Value
Water clean up	80 min	90 min
Initial set 70°	> 2 hours	> 5 hours
Shrinkage at 7 days	< 0.25%	< 0.25%
Sag (vertical)	None	None
Bond strength (psi) 14 days	> 1000	> 1200
Compressive strength (psi) 7 days	> 3500	> 7000
Tensile strength (psi) 7 days	> 1000	> 2000



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**Packaging:** Colors: 22 colors available.

1 gallon unit consists of: Part A – Liquid Epoxy Resin  
Part B – Liquid Hardener  
Part C – Dry Colored Aggregate  
Commercial kits are available: 2 gallon kit

**Shelf Life:** Reference Parex USA Expiration Date of Products Technical Bulletin.

## 5. Installation

*Surface Preparation:* All surfaces on which tiles are to be set must be dry, structurally sound, and not subject to temperatures below 65° F or above 95° F.

### Substrates

*Cementitious Substrates:* Surfaces must be dry and free of all efflorescence, grease, oil, dirt, dust, curing compounds, sealers, cut back residue, old adhesives, asphalt coatings and any other foreign matter. Waterproofing and crack isolation membrane must be approved in writing by an officer of the manufacturer. Cleaning may be accomplished via mechanical sanding, scraping, or chipping. Surfaces may be cleaned with muriatic acid if thoroughly flushed and neutralized. Smooth steel troweled concrete floor should be roughened to insure a superior bond. Dry porous concrete should not be dampened with water prior to the application of epoxy mortar. Instead skim-coat a thin layer of epoxy mortar first, then apply sufficient mortar to be notched.

*Plywood Substrates:* All wooden flooring, when placed over conventional floor joist or other systems should be of a design and thickness so as to maintain a substrate of deflection not to exceed 1/360 of span, including live and dead load. Further, the flooring to receive the Pro Epoxy should be exterior grade plywood only, secured with screw-type nails at 6" centers along the edges and 8" centers within the field, and glued where possible. Leave a gap of 1/4" between sheets of plywood and all materials which they abut. During application of epoxy to plywood surfaces, force epoxy between edges of plywood sheets to completely fill the gaps. In addition, all wooden surfaces must be for interior use only and protected from exposure to water.

*Miscellaneous Substrates:* Other substrates like steel, glass, and fiberglass must be free of all oils, coatings, dust and moisture. In addition, these surfaces should be roughened to insure a good bond. It is also essential that the existing surface be structurally sound and firmly attached to the supporting structure. See EJ171 in T.C.A. Handbook for detailed specifications.

*Expansion Joints:* Install in accordance with local building codes and TCNA Handbook method EJ171-09.

**Mixing:** For all units, pour Part A & B into a clean mixing pail and mix thoroughly. Add the entire content of Part C and mix until uniform. If a power mixer is used, it must be 300 RPM or less to avoid entrapping air bubbles, which cause pinholes in the grout. Do not over-mix, as this will cause the epoxy to flash set.

### Application

*For Setting:* Spread mortar with flat side of trowel to key-in substrate. Then, reapply additional mortar to a depth sufficient to be notched with a suitable trowel that will leave only enough mortar to give 100% contact with back of tile and a subsequent mortar bed of 1/16" for ceramic mosaic tile, to 3/32" for quarry tile. Temperature affects time. Therefore, it is advisable to occasionally remove a tile to be sure mortar has not skinned over and sufficient transfer is being made. Approximate tack time is 30 minutes at 70° F. It is also required that tiles be "beat-in" to obtain good transfer of mortar to tile and for proper alignment. Should epoxy mortar get on surface of tile, remove it with a damp sponge before it cures.

**NOTE:** As a practical test it is recommended that three or more separate twelve inch square areas of tile be bonded to the properly prepared surface with the actual tile and bonding materials that will be used on the finished installation. These should be allowed to cure for 3 – 7 days and then removed with a hammer and chisel. At this point, one can determine if adequate bond has been obtained or if a problem exists.

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**For Grouting:** Allow tiles to set firmly before grouting (1-2 days). Mix the epoxy as described above. Apply grout using a hard rubber float filling all joints full and evenly with surface of tile. Remove all excess epoxy from surface of tile with the edge of the rubber float before it begins to set by holding the float at a 90° angle and pulling it diagonally across the joints. Clean the remaining grout off the surface of the tile using clean water and a Scotch-Brite® pad and towel, or a stiff sponge with rounded edges. Special care should be exercised to avoid removing excessive material from the grout joint during cleaning as Pro Epoxy will be very soft.

**NOTE:** On unglazed tiles, sealing with a grout release may be necessary to prevent residue from being absorbed into tile.

**Curing:** After application, protect setting and grouting material for 1 day against foot traffic and protect the grout from chemical (industrial cleaners) attack for the first 14 days. Initial maintenance for the first 7 days shall be done with clean water only. The day following grouting, if haze is present, it must be removed with clean water only.

**Limitations:** Pro Epoxy should not be subjected to an environment above 250° F for any extended period of time. Although suitable for exterior applications, lighter colors will darken from UV exposure. Appropriate maintenance is based on the site environment. Assure compatibility of cleaning products and methods with tile, grout and setting material manufacturers. Remove cleaning residue and other contaminants to avoid damage from prolonged exposure to food, biological waste, industrial chemicals and aggressive cleaning solutions. Usage of "no rinse" cleaning solutions is not recommended.

## 6. Availability

Merkrete Pro Epoxy is available at leading tile houses and construction distributors. Contact Merkrete or visit our web site for the name of the nearest dealer at [www.merkrete.com](http://www.merkrete.com).

## 7. Warranty

5 year, 10 year and Limited Lifetime warranties are available. Contact Merkrete Technical Services or visit our web site for specific warranty information. Merkrete Systems warrants that this product meets applicable ANSI standards in force at the time of manufacture.

### PRO EPOXY GROUT COVERAGE CHART

#### SQUARE FEET PER GALLON

MOSAICS	JOINT WIDTHS		
	1/8"	1/4"	3/8"
1" x 1" x 3/16"	40	23	18
2" x 2" x 1/4"	56	30	22
4" x 4" x 1/4"	107	56	39

#### WALL TILE

WALL TILE	JOINT WIDTHS		
	1/8"	1/4"	3/8"
4-1/4" x 4-1/4" x 5/16"	91	47	32
6" x 6" x 1/4"	158	81	56

#### FLOOR TILE

FLOOR TILE	JOINT WIDTHS		
	1/8"	1/4"	3/8"
4' x 8" x 1/2"	70	36	25
6" x 6" x 3/8"	105	54	37
6" x 6" x 1/2"	79	40	28
8" x 8" x 3/8"	140	71	48
12" x 12" x 3/8"	208	105	71
12" x 12" x 1/2"	156	79	53
12" x 12" x 5/16"	250	127	86
13" x 13" x 3/8"	225	114	77
16" x 16" x 3/8"	276	140	94
18" x 18" x 3/8"	311	157	105
20" x 20" x 3/8"	345	174	117

### PRO EPOXY SETTING MATERIAL COVERAGE CHART

#### SQUARE FEET PER GALLON

Trowel Size	3/16" x 1/4" V-Notch	1/4" x 1/4" Square Notch
Pro Epoxy per Gal.	36	22

The values obtained from the chart are based on an empty grout joint and it does not account for setting material left in the joint or waste. Actual grout usage may vary due to installation techniques and different types of tile surfaces used on the jobsite.

## 8. Maintenance

None required, but installation performance and durability may depend on properly maintaining products supplied by other manufacturers.

## 9. Technical Services

Merkrete Systems maintains technical field representatives available throughout the country. Call Technical Services at 800-226-2424 for the nearest representative.

## 10. Filing Systems

Merkrete architectural product information available either in catalog form, or electronically on our website at [www.merkrete.com](http://www.merkrete.com).

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