


**MERKRETE**

# 820 Merlite

## Superior Grade Polymer Modified Light Weight Flexible Medium Bed Portland Cement EGP Mortar

### 2. Manufacturer

Parex USA, Inc.  
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866-516-0061  
www.merkrete.com

### 3. Product Description

**BASIC USE:** Merkrete 820 Merlite Thin Set is a superior grade polymer modified portland cement flexible EGP thin set mortar. Merkrete 820 Merlite Thin Set has excellent workability, improves job site conditions, indoor air quality, non slump and non sag performance when installing ceramic tile and natural stone. It is recommended for use in the thin set installation method for absorptive, semi-vitreous vitreous tile, ceramic, mosaic, quarry, thin brick, natural stone, and porcelain and glass tiles over properly prepared substrates. In dry areas, it is suitable for exterior grade plywood and gypsum board.

**Uses:** Merkrete 820 Merlite Thin Set can be used as a thin set mortar for ceramic tile and natural stone for both walls and floors in interior and exterior applications. It is to be used as a thin set from 3/32" to 3/4" after the tiles have been properly beat in. 820 Merlite Thin Set is suitable for both residential and commercial construction.

#### Advantages

- Freeze thaw stable
- Interior and exterior
- Increased flexibility
- Non sag for wall areas
- Bonds to most surfaces
- Contributes to LEED projects
- Lightweight and easy to trowel
- Superior adhesion for porcelain tile
- Thin set or medium bed performance
- Available in both gray and white colors
- Excellent for walls and large format tile
- Same coverage as a typical 50 lb. mortar
- Exceeds ANSI A118.4 for latex portland cement mortar and 118.11 for EGP latex portland cement mortar

#### Suitable Substrates

- Brick masonry
- Cement backer board<sup>1</sup>
- Cement mortar beds
- Cement plaster
- Cement terrazzo
- Ceramic tile and stone
- Concrete
- Concrete masonry
- Exterior grade plywood<sup>2</sup>
- Gypsum mortar bed<sup>3</sup>
- Gypsum wallboard<sup>2</sup>
- Merkrete brand membranes

<sup>1</sup> Consult cement backer board manufacturer for installation recommendations and to verify acceptability for exterior use

<sup>2</sup> Interior use only

<sup>3</sup> Merkrete Fracture Guard 5000 crack isolation membrane and Merkrete 101 Overspray Primer is required for this installation. Consult Merkrete Technical Services for gypsum mortar bed recommendations using Merkrete Fracture Guard 5000 membrane

**Limitations:** Do not use 820 Merlite Thin Set below 40° F (4° C) or above 95° F (35° C). Use caution; do not allow mortar to freeze for the first 72 hours. Do not soak tiles previous to installation. 820 Merlite Thin Set must not be used to apply over asphalt sheeting, vinyl covered wall board, Masonite®, cement asbestos board, metal, glass, plastic, or other unstable substrates. Improperly cured or wet plywood, particle board or strip wood are not suitable substrates. Installations that will be continually wet like swimming pools, fountains and gang showers, the completed installation should be cured a minimum of 14 days and allowed to dry before exposure to water. For white or light colored marbles use 820 Merlite Thin Set white mortar. Some dimensional stone tile like resin backed, black green and red marbles may warp when installed with water based setting materials. These water sensitive stone tiles should be installed with Merkrete Pro Epoxy. For use of 820 Merlite Thin Set over additional substrates or situations not mentioned in these instructions, contact Merkrete's technical department.



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## 4. Technical Data

*Applicable Standards:* Merkrete 820 Merlite Thin Set meets or exceeds industry requirements ANSI A118.4 for latex portland cement mortar and 118.11 for EGP latex portland cement mortar. Follow ANSI A108.5 for installation.

### Properties:

ANSI 118.4	ANSI Requirements	820 Merlite Results
Open Time at 70° F	> 50 minutes	> 60 minutes
Glazed Wall Tile, 28 day shear	> 300 psi	> 400 psi
Impervious Mosaic, 7 day shear	> 200 psi	> 250 psi
Quarry Tile, 4 week shear	> 150 psi	> 380 psi
LEED v3 NC VOC	EQ Credit 4.1	820 Merlite Results
VOC	< 65 g/l	0 g/l
LEED v3 NC Recycled Content	MR Credit 4.1 & 4.2	820 Merlite Results
Recycled material	Pre-consumer	20 – 25%

**Packaging:** 30 lb. bag (13.6 kg.) 48 bags per pallet | Colors: Gray and White

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

## 5. Installation

*Surface Preparation:* All surfaces must be between 40° F (4° C) to 95° F (35° C) and structurally sound (deflection not to exceed 1/360 of the span), dry, clean and free from oil, grease, wax, paint, old adhesives, sealers and curing compounds. Any contaminants which inhibit proper bond must be removed. Substrate preparation should be completed following ANSI A108.01 "General Requirements: Subsurfaces and Preparation by Other Trades." All substrates should be plumb and true, surface deviation should not exceed 1/4" in 10'. Patching, leveling or areas requiring a mortar bed should be prepared using Merkrete underlayments. Movement (expansion) joints should be provided to comply with TCNA method EJ 171.

*Plywood Substrates:* Maximum joist spacing should be 16" on center. Plywood should be exterior grade only. Maintain a gap of 3/16" between plywood underlayment sheets edges and all that abut walls, columns, posts and adjacent sheets. All plywood installations should be use in interior areas only and protected from exposure to moisture.

*Cement Substrates:* All concrete substrates should be cured a minimum of 28 days. Smooth steel troweled floors should be roughed up using mechanical chipping, scraping or shot blasting. Dampen porous or dry concrete previous to installation of tile. Do not leave puddles or standing water.

*Membranes:* 820 Merlite is suitable over Merkrete Systems membranes like Hydro Guard 2000, Hydro Guard 1, Fracture Guard 5000, Sound Shield 7000, Sound Shield PNS 40 and Sound Shield PNS 90. Low absorption membranes may require longer cure times.

*Cement Backer Board:* Follow cement board manufacturer's instructions.

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## Mixing

*For excellent non sag and medium bed characteristics:* In a clean container, add approximately 5 quarts (4.7 liters) of clean potable water. Then add the contents of the 30 lb. (13.608 kg) 820 Merlite Thin Set mortar. Mix thoroughly by hand or with a slow speed mixer to a smooth, thick, trowelable consistency. Allow mortar to slake for approximately 5 to 10 minutes, and then remix before using. Remix without adding additional water or powder.




*For thin set characteristics:* In a clean container, add approximately 5-1/2 quarts (5.2 liters) of clean potable water. Then add the contents of the 30 lb. (13.608 kg.) 820 Merlite Thin Set mortar. Mix thoroughly by hand or with a slow speed mixer to a smooth, thick, trowelable consistency. Allow mortar to slake for approximately 5 to 10 minutes, and then remix before using. Remix without adding additional water or powder.

Mortar consistency shall be such that when applied with the recommended notched trowel to the substrate, the ridges formed in the mortar do not flow or slump. During use, stir mortar mix occasionally. Do not temper with additional water. Do not add latex liquid to 820 Merlite Thin Set.

**Application:** Apply mortar to the substrate with the flat side of the trowel, with enough pressure to firmly work into the surface. With a notched trowel, immediately follow with a heavier coat of material using the appropriate trowel and enough mortar to provide 100% coverage to the back of the tile. Some extruded or lug back tiles back-buttering of tiles may be required. Do not spread more mortar than can be covered in 20 minutes or before the mortar skins over. It is advised that during the installation, remove a tile to insure the mortar has not skinned over and check the tile and substrate mortar coverage. Comb the mortar using an appropriate notched trowel in one direction. Place tiles in mortar, slide back and forth perpendicular to the ridges to insure proper coverage. Do not adjust tiles set in mortar after 15 minutes.

**Cleaning:** Water is all that is needed to remove any uncured mortar from tiles, tools and equipment.

## Coverage:

RECOMMENDED NOTCH SIZE		
		
1/4" x 1/4" 6 mm x 6 mm	1/4" x 3/8" 6 mm x 10 mm	1/2" x 1/2" 12 mm x 12 mm
Ceramics	Quarry Tile, Rough Stone	Large Tile, Marble, Stone
APPROXIMATE COVERAGES		
65 – 75 Ft <sup>2</sup> 6.0 – 6.9 m <sup>2</sup>	55 – 65 Ft <sup>2</sup> 5.1 – 6.0 m <sup>2</sup>	35 – 45 Ft <sup>2</sup> 3.2 – 4.2 m <sup>2</sup>

\*Coverage depends on trowel notch size, substrate and job conditions.

## 6. Availability

Merkrete 820 Merlite 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.

## 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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