3. Product Description

**Basic Use:** Merkrete 855 XXL is a one-step polymer modified portland cement setting adhesive for installing extra large format porcelain, ceramic tile and natural stone on both walls and floors. 855 XXL with its unique properties can be used as a thin or medium bed setting adhesive for installing large format, ceramic, porcelain and irregular thickness stone without the need of back buttering the tile.

**Uses:** 855 XXL is ideal for use in installations of extra large oversize ceramic tile and natural stone for both walls and floors in both interior and exterior applications. It is recommended for use for absorptive, semi vitreous, vitreous tile and impervious ceramic tile such as porcelain tile and natural stone over properly prepared masonry, concrete, cement backer board, membranes and existing ceramic tile. For interior dry areas, it is suitable for properly prepared gypsum board and exterior grade plywood substrates. 855 XXL is suitable for both residential and commercial construction. It is recommended for use in the thin set installation method for vitreous tiles like porcelain over low or non-absorptive subfloors, and membranes.

**Advantages**
- One step application
- Use as either a Thin or Medium Bed
- Freeze thaw stable
- Interior and exterior
- Bonds to most surfaces
- High performance adhesion for porcelain tile
- Exceeds ANSI A118.4 for latex portland cement mortar
- Exceeds requirements or ANSI A 118.11 EGP latex portland cement mortar.

**Suitable Substrates**
- Brick masonry
- Cement backer board
- Cement mortar beds
- Cement plaster
- Cement terrazzo
- Ceramic tile and stone
- Concrete
- Concrete masonry
- Cutback adhesive
- Exterior grade plywood
- Gypsum wallboard
- Merkrete membranes
- Existing tile
- Post tension
- Vinyl composition flooring

1 Consult cement backer board manufacturer for installation recommendations and to verify acceptability for exterior use
2 Remove as much Cutback adhesive as possible, apply 626 Primer. If a Waterproof/Crack Isolation is needed use Merkrete's membranes
3 Interior use only

4. Technical Data

Applicable Standards: Merkrete 855 XXL meets or exceeds industry requirements ANSI A118.4 for latex portland cement mortar and ANSI A118.11 for EPG latex portland cement mortar. Follow ANSI A108.5 for installation.
Properties:

**ANSI 118.4**

<table>
<thead>
<tr>
<th>Glazed Wall Tile, 48 hour shear</th>
<th>ANSI Requirements</th>
<th>855 XXL Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 100 psi</td>
<td>&gt; 260 psi</td>
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</table>

<table>
<thead>
<tr>
<th>Impervious Mosaic, 28 day shear</th>
<th>&gt; 200 psi</th>
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<tbody>
<tr>
<td>&gt; 480 psi</td>
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<thead>
<tr>
<th>LEED v3 NC VOC</th>
<th>EQ Credit 4.1</th>
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<tbody>
<tr>
<td>VOC</td>
<td>&lt; 65 g/l</td>
</tr>
<tr>
<td></td>
<td>0 g/l</td>
</tr>
</tbody>
</table>

Packaging: 50 lb. bag (22.7 kg.) 48 bags per pallet | Color: White and Gray

Shelf Life: One year from manufacturing in sealed original container, when properly stored at room temperature, off the ground in a controlled, dry, heated area.

5. Installation

Surface Preparation: All surfaces must be between 40º F (4º C) to 95º F (35º 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 contaminates which inhibit proper bond must be removed. Substrate preparation should be completed following ANSI A108 AN-2 “General Requirements for Sub-surfaces.” 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’s Underlayments. Movement (expansion) joints should be provided to comply with TCA method EJ 171.

Substrates

- **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 interior areas only and protected from exposure to moisture.

- **Concrete 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.

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

Mixing: In a clean container, add approximately 6.6 quarts (6.2 liters) of clean potable water. Then add the contents of the 50 lb. (22.7 kg.) 855 XXL mortar. Mix thoroughly by hand or with a slow speed mixer to a smooth, thick, trowelable consistency. Allow mortar to slake for approximately 15 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 855 XXL.
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 then 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.

Limitations: Do not use 855 XXL below 40º F (4º C) or above 95º F (35º C). Use caution; do not allow mortar to freeze for the first 72 hours. Cool and wet weather may delay the set times of the XLF thinset mortar. Do not soak tiles previous to installation. 855 XXL must not be used to apply over asphalt sheeting, vinyl covered wall board, Masonite®, cement asbestos board, metal, glass, plastic, gypsum mortar beds 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 855 XXL 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 855 XXL over additional substrates or situations not mentioned in these instructions, contact Merkrete Technical Services.

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

Coverage:

<table>
<thead>
<tr>
<th>RECOMMENDED NOTCH SIZE</th>
<th>1/4&quot; x 1/4&quot;</th>
<th>1/4&quot; x 3/8&quot;</th>
<th>1/2&quot; x 1/2&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 mm x 6 mm</td>
<td>6 mm x 10 mm</td>
<td>12 mm x 12 mm</td>
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</table>

Ceramics        | Quarry Tile, Rough Stone | Large Tile, Marble, Stone |

<table>
<thead>
<tr>
<th>APPROXIMATE COVERAGE</th>
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<tbody>
<tr>
<td>65 – 75 ft²</td>
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<tr>
<td>6.0 – 6.9 m²</td>
</tr>
<tr>
<td>55 – 65 ft²</td>
</tr>
<tr>
<td>5.1 – 6.0 m²</td>
</tr>
<tr>
<td>35 – 45 ft²</td>
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<tr>
<td>3.2 – 4.2 m²</td>
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* Coverage depends on trowel notch size, substrate and job conditions

6. Availability
Merkrete 855 XXL is available at leading tile houses and construction distributors. Contact Merkrete for the name of the nearest dealer or visit our website at www.merkrete.com for a Distributor Directory.

7. Warranty
5 year, 10 year and Limited Lifetime warranties are available. Contact Merkrete Technical Services for specific warranty information. Merkrete 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.