



# Thin-Set Troubleshooting Guide for Exterior Glue Plywood Substrates

## TDS 210

Complaint	Cause(s)	Prevention
<b>Cracked Tiles or grout</b>	<ol style="list-style-type: none"> <li>1. Deflection in substrate</li> <li>2. Improper thin-set used</li> <li>3. Lack of movement joints</li> <li>4. Not enough thin-set on the back of the tile</li> </ol>	<ol style="list-style-type: none"> <li>1. Substrate deflection rating of L/360 must be met to accept tile. Substrate deflection rating of L/480 must be met to accept stone. For proper construct of exterior glue plywood floors, follow <a href="#">TDS 152</a>.</li> <li>2a. Use 254 Platinum, 254 Platinum Plus, or MULTIMAX™ LITE.</li> <li>2b. Use LATAPOXY® 300 Adhesive or LATAPOXY BIOGREEN™ 300.</li> <li>3. Follow Tile Council of North America (TCNA) Detail EJ171 for recommendation for placement of movement joints.</li> <li>4. Use recommended notch trowel for setting larger format tiles. Tiles larger than 8" x 8" (200mm x 200mm) require back-buttering for proper installation. Periodically check coverage and bond by picking up freshly installed tile and inspecting.</li> </ol>
<b>Loose Tile</b>	<ol style="list-style-type: none"> <li>1. Deflection in substrate</li> <li>2. Improper thin-set used</li> <li>3. Movement or settlement of substrate</li> <li>4. Lack of movement joints</li> <li>5. Not enough thin-set on the back of the tile</li> <li>6. Substrate surface not cleaned</li> <li>7. Thin-set dried out before tile is laid</li> <li>8. Kiln release or residue on back of tile</li> <li>9. Open to traffic before tiles set firm</li> </ol>	<ol style="list-style-type: none"> <li>1. Substrate deflection rating of L/360 must be met to accept tile. Substrate deflection rating of L/480 must be met to accept stone. For proper construct of exterior glue plywood floors, follow <a href="#">TDS 152</a>.</li> <li>2a. Use 254 Platinum, 254 Platinum Plus, or MULTIMAX™ LITE.</li> <li>2b. Use LATAPOXY 300 Adhesive or LATAPOXY BIOGREEN™ 300</li> <li>3. Investigate floors and walls throughout project for cracks, levelness, and proper joist spacing. Ensure that floor construct meets industry and LATICRETE standards. See <a href="#">TDS 152</a> for more information.</li> <li>4. Follow TCNA Detail EJ171 for recommendation of placement of movement joints.</li> <li>5. Use recommended notch trowel for setting larger format tiles. Tiles larger than 8" x 8" (200mm x 200mm) require back-buttering for proper installation. Periodically check coverage and bond by picking up freshly installed tile and inspecting.</li> <li>6. Surface must be free of contamination (e.g. sealers, curing compounds, coatings, oil, paint, dirt and dust). Chemical cleaning is not recommended.</li> <li>7. Spread only enough thin-set mortar that can be covered within 15 to 20 minutes. Dampen substrate to allow for more open time with thin-set.</li> <li>8. Be sure to clean any and all contaminants on the back of tile so as ensure proper adhesion of tile to thin-set.</li> <li>9. Allow a sufficient amount of time for tiles to set firm prior to opening to traffic or use.</li> </ol>

<b>Hollow Sounding Tile</b>	<ol style="list-style-type: none"> <li>1. Deflection in substrate</li> <li>2. Movement or settlement of substrate</li> <li>3. Not enough thin-set on the back of the tile</li> <li>4. Substrate surface not cleaned</li> <li>5. Kiln release or residue on back of tile</li> <li>6. Lack of movement joints</li> </ol>	<ol style="list-style-type: none"> <li>1. Substrate deflection rating of L/360 must be met to accept tile. Substrate deflection rating of L/480 must be met to accept stone. For proper construct of exterior glue plywood floors, follow <a href="#">TDS 152</a>.</li> <li>2. Investigate floors and walls throughout project for cracks, levelness, and proper joist spacing. Ensure that floor construct meets industry and LATICRETE standards. See <a href="#">TDS 152</a> for more information.</li> <li>3. Use recommended notch trowel for setting larger format tiles. Tiles larger than 8" x 8" (200mm x 200mm) require back-buttering for proper installation.</li> <li>4. Surface must be free of contamination (e.g. sealers, curing compounds, coatings, oil, paint, dirt and dust). Chemical cleaning is not recommended.</li> <li>5. Be sure to remove contaminants on the back of tile so as ensure proper adhesion of tile to thin-set.</li> <li>6. Follow TCNA Detail EJ171 for recommendation of placement of movement joints.</li> </ol>
Tiles Tenting	<ol style="list-style-type: none"> <li>1. Lack of movement joints</li> </ol>	<ol style="list-style-type: none"> <li>1. Follow TCNA Detail EJ171 for recommendation of placement of movement joints.</li> </ol>

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