



Thin-Set Troubleshooting Guide for Exterior Glue Plywood Substrates

TDS 210

Complaint	Cause(s)	Prevention
Cracked Tiles or grout	<ol style="list-style-type: none"> 1. Deflection in substrate 2. Improper thin-set used 3. Lack of movement joints 4. Not enough thin-set on the back of the tile 	<ol style="list-style-type: none"> 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 LATICRETE TDS 152. 2a. Use 333 Super Flexible Additive mixed with one of the following premium thin-sets: <ul style="list-style-type: none"> • 272 Mortar • 317 • 220 Marble & Granite Mortar 2b. Use 254 Platinum or 253 Gold. 2c. Use LATAPOXY® 300 Adhesive 3. Follow Tile Council of North America (TCNA) Detail EJ-171 for recommendation for placement of movement joints. 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.
Loose Tile	<ol style="list-style-type: none"> 1. Deflection in substrate 2. Improper thin-set used 3. Movement or settlement of substrate 4. Lack of movement joints 5. Not enough thin-set on the back of the tile 6. Substrate surface not cleaned 7. Thin-set dried out before tile is laid 8. Kiln release or residue on back of tile 9. Open to traffic before tiles set firm 	<ol style="list-style-type: none"> 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 LATICRETE TDS 152. 2a. Use 333 Super Flexible Additive mixed with one of the following premium thin-sets: <ul style="list-style-type: none"> • 272 Mortar • 317 • 220 Marble & Granite Mortar 2b. Use 254 Platinum or 253 Gold. 2c. Use LATAPOXY 300 Adhesive 3. Investigate floors and walls throughout project for cracks, levelness, and proper joist spacing. Ensure that floor construct meets industry and LATICRETE standards. See LATICRETE TDS 152. 4. Follow TCNA Detail EJ-171 for recommendation of placement of movement joints. 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. 6. Surface must be free of contamination (e.g. sealers, curing compounds, coatings, oil, paint, dirt and dust). Chemical cleaning is not recommended. 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. 8. Be sure to clean any and all contaminants on the back of tile so as ensure proper adhesion of tile to thin-set.

		9. Allow sufficient time for tiles to set firm prior to opening to traffic or use.
Hollow Sounding Tile	<ol style="list-style-type: none"> 1. Deflection in substrate 2. Movement or settlement of substrate 3. Not enough thin-set on the back of the tile 4. Substrate surface not cleaned 5. Kiln release or residue on back of tile 6. Lack of movement joints 	<ol style="list-style-type: none"> 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 LATICRETE TDS 152. 2. Investigate floors and walls throughout project for cracks, levelness, and proper joist spacing. Ensure that floor construct meets industry and LATICRETE standards. See LATICRETE TDS 152. 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. 4. Surface must be free of contamination (e.g. sealers, curing compounds, coatings, oil, paint, dirt and dust). Chemical cleaning is not recommended. 5. Be sure to remove contaminants on the back of tile so as ensure proper adhesion of tile to thin-set. 6. Follow TCNA Detail EJ-171 for recommendation of placement of movement joints.
Tiles Tenting	<ol style="list-style-type: none"> 1. Lack of movement joints 	<ol style="list-style-type: none"> 1. Follow TCNA Detail EJ-171 for recommendation of placement of movement joints.

Technical Data Sheets are subject to change without notice. For latest revision, check our website at www.laticrete.com
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