



Thin-Set Troubleshooting Guide for Cement Backer Board Substrates

TDS 208

Complaint	Cause(s)	Prevention
Cracked Tiles or Grout	<ol style="list-style-type: none"> 1. Deflection in substrate 2. Improper installation of cement backer board 3. Lack of movement joints 4. Not enough thin-set on the back of the tile 5. Improper tile adhesive selection 	<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 installation of cement backer board, follow board manufactures recommendation and TDS 126 and TDS 133. 2. Use correct thin-set mortar to laminate cement board to the substrate. Use recommended thin-set mortar for application. Follow TDS 126 and TDS 133. 3. Follow Tile Council of North America (TCNA) Detail EJ171 for recommendation of 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. 5. Use recommended thin-set mortar for application
Loose Tile	<ol style="list-style-type: none"> 1. Deflection in substrate 2. Improper installation of cement backer board 3. Improper thin-set used 4. Movement or settlement of substrate 5. Lack of movement joints 6. Floor subjected to stress prior to recommended curing period 7. Substrate surface not cleaned 8. Thin-set dried out before tile is laid 9. Kiln release or residue on back of tile 10. 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 installation of cement backer board, follow board manufactures recommendation and TDS 126 and TDS 133. 2. Use correct thin-set mortar to laminate cement board to the substrate. Use recommended thin-set mortar for application. Follow TDS 126 and TDS 133. 3. Use 254 Platinum, 257 TITANIUM™, or MULTIMAX™ LITE. 4. Investigate floors and walls throughout project for cracks, levelness, and proper joist spacing. Ensure that the floor construct meets industry and LATICRETE standards. See TDS 126 and TDS 133. 5. Follow TCNA Detail EJ171 for recommendation of placement of movement joints. 6. Allow the installation to cure properly before opening to use or traffic. 7. Surface must be free of contamination (e.g. sealers, curing compounds, coatings, oil, paint, dirt and dust). Chemical cleaning is not recommended. 8. 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. 9. Be sure to remove contaminants on the back of tile so as ensure proper adhesion of tile to thin-set. 10. 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.

Complaint	Cause(s)	Prevention
Hollow Sounding Tile	<ol style="list-style-type: none"> 1. Deflection in substrate 2. Improper installation of cement backer board 3. Movement or settlement of substrate 4. Substrate surface not cleaned (Poor contact) 5. Kiln release or residue on back of tile 6. Lack of movement joints 7. 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 installation of cement backer board, follow board manufactures recommendation and TDS 126 and TDS 133. 2. Use correct thin-set mortar to laminate cement board to the substrate. Use recommended thin-set mortar for application. Follow TDS 126 and TDS 133. 3. Investigate floors and walls throughout project for cracks, levelness, and proper joist spacing. Ensure that the floor construct meets industry and LATICRETE standards. See TDS 126 and TDS 133. 4. Surface must be free of contamination e.g. sealers, cleaning 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 EJ171 for recommendation of placement of movement joints. 7. 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.
Tiles Tenting	<ol style="list-style-type: none"> 1. Lack of movement joints 	<ol style="list-style-type: none"> 1. Follow TCNA Detail EJ171 for recommendation of placement of movement joints.

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