



For The Builders of
A Better World

Bonding Tile and Stone to Steel, Metal and Aluminium Substrates

TDS-1146

More and more frequently, unusual substrates including steel, metal and aluminium are being used in tile or stone installations. Swimming pools, spas, hot tubs, elevator cabs, and cooler floors and walls frequently have a steel surface on which to bond tile. Below are methods to properly install tile to these substrates.

Method 1:

1. Steel, metal or aluminium substrate must be rigid and meet the maximum allowable standard for deflection of L/360 for ceramic tile or L/720 for stone tile
2. Tack weld or mechanically fasten 1.8kg/m² galvanized or otherwise suitable diamond metal lath over the steel surface in accord with good trade practice to provide an adequate structural connection for this installation and sufficient space for adequate mortar thickness behind.
3. Apply a scratch and levelling coat of 3701 Fortified Mortar Bed; or, 3701 Mortar Admix mixed with 226 Thick Bed Mortar to encapsulate and fill the lath.
4. After the mortar hardens, The HYDRO BAN[®] Waterproofing System may be installed where specified.
5. Tile may be installed with 254 Adhesive, 335 Adhesive or 4237 Latex Additive mixed with 211. In areas where a more chemically resistant adhesive is necessary (or when installing water sensitive marble or agglomerate) install with LATAPOXY[®] 300 Adhesive or LATAPOXY SP-100.
6. When tile has set firm, grout with LATAPOXY SP-100 Grout, SPECTRALOCK[®] PRO Premium Grout, PERMACOLOR[®] Grout or PERMACOLOR Select Grout. For areas subjected to food acids, harsh chemicals or extreme heat use SPECTRALOCK 2000 IG.

Method 2:

1. Steel or aluminium must be rigid, meet the maximum allowable standard for deflection of L/360 for ceramic tile or L/720 for stone tile, and be free of rust, dirt, paint, manufacturing oils, or other surface contamination.
2. Steel manufacturer / contractor must inspect steel for any signs of rust or corrosion. Clean, remove, passivate steel in accord with steel manufacturer's guidelines to ensure that rust / corrosion is completely removed prior to tiling.
3. Wash steel surface with strong detergent to ensure that all manufacturing oils are removed, rinse completely and allow to dry. Refer to steel manufacturer's guidelines for steel surface preparation when cladding with tile or stone if any.
4. Install tile or stone with LATAPOXY 300 Adhesive or LATAPOXY SP-100 as adhesive by following instructions outlined in respective Product Data Sheets: [LATAPOXY 300 DS-1047](#) and [SP-100 DS-1070](#).
5. Grout tile or stone with LATAPOXY SP-100 Grout, SPECTRALOCK PRO Premium Grout, PERMACOLOR Grout, or, PERMACOLOR Select Grout. For areas subjected to food acids harsh chemicals or extreme heat use SPECTRALOCK 2000 IG.