



Globally Proven  
Construction Solutions

# Bonding Tile and Stone to Steel 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.

### The preferred method for installation over steel is;

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/480 for stone tile
2. Tack weld or mechanically fasten 1.8kg/m<sup>2</sup> 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, HYDRO BAN<sup>®</sup> may be installed where specified.
5. Tile may be installed with 254 Platinum Adhesive, 335 Premium Flexible Adhesive or 4237 Latex Additive mixed with 211 Crete Filler Powder. In areas where a more chemically resistant adhesive is necessary (or when installing water sensitive marble or agglomerate) install with LATAPOXY<sup>®</sup> 300 Adhesive.
6. When tile has set firm, grout with SPECTRALOCK<sup>®</sup> PRO Premium Grout; or, PERMACOLOR<sup>®</sup> Grout. For areas subjected to food acids, harsh chemicals or extreme heat use SPECTRALOCK 2000 IG.

### Or, the alternative method for installation over steel is;

1. Steel or aluminium must be rigid, meet the maximum allowable standard for deflection of L/360 for ceramic tile or L/480 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 by following instructions outlined in DS-1047.
5. Grout tile or stone with SPECTRALOCK PRO Premium Grout; or, PERMACOLOR Grout. For areas subjected to food acids, harsh chemicals or extreme heat use SPECTRALOCK 2000 IG.

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