Ceramic Tile, Masonry Veneer & Stone Over Cementitious Backer Units
TDS 126

GENERAL CONDITIONS

Systems, including the framing system and panels, over which tile or stone will be installed shall be in conformance with the International Residential Code (IRC) for residential applications, the International Building Code (IBC) for commercial applications, or applicable building codes. The project design should include the intended use and necessary allowances for the expected live load, concentrated load, impact load, and dead load including the weight of the finish and installation materials.

All CBU must comply with American National Standards Institute, Inc. (ANSI) "Standards for Test Methods and Specifications for Cementitious Backer Units {A118.9}". CBU installation must comply with ANSI "Interior Installation of Cementitious Backer Units {A108.11}".

Provide movement/expansion joints for ceramic tile, stone and thin brick installations as per Tile Council of North America, Inc. (TCNA) Handbook for Ceramic, Glass, and Stone Tile Installation {Movement Joint Essentials EJ-171}.

INTERIOR WOOD FLOORS
- Refer to TDS 152 "Bonding Ceramic Tile, Stone or Brick Over Wood Floors" for additional information on wood floor construction and requirements.
- Lay out the CBU installation so the long side of each board runs perpendicular to, and is offset from, the main joints/seams in the wood substrate.
- Remove sawdust, dirt, dust and all other contaminants or bond breakers from the wood substrate.
- Over clean **exterior glue plywood** substrates, apply mortar or adhesive as a bond coat. Lay the CBU into the bond coat while the surface is still wet and tacky. Spread only as much bond coat as can be covered in 15–20 minutes. Remove any mortar or adhesive that has "skinned over" and re-apply fresh material. Recommended mortars:
  LATAPOXY® 300 Adhesive;
  LATAPOXY 210 Adhesive;
  125 Sound & Crack Adhesive*
  SURE SET™*
  333 Flexible Additive plus 272 Mortar;
  333 Flexible Additive plus 317 Mortar;
  333 Flexible Additive plus 220 Marble & Granite Mortar;
  101 Rapid Latex Admix plus 272 Mortar;
  101 Rapid Latex Admix plus 317 Mortar;
  101 Rapid Latex Admix plus 220 Marble & Granite Mortar;
  255 MULTIMAX™ ^
  254 Platinum;
  254R Platinum Rapid;
  4-XLT;
  4-XLT Rapid;
  253 Gold;
  253R Gold Rapid; or
  252 Silver.
- Over clean **hardwood strip or Oriented Strand Board (OSB)** substrates, make a "full spread" application of construction adhesive as a bond coat. Lay the CBU into the bond coat while the surface is still wet and tacky. Spread only as much bond coat as can be covered in 15–20 minutes. Remove any construction adhesive that has "skinned over" and re-apply fresh material.
  Recommended construction adhesive: Liquid Nails® PL2000 or equivalent.

- Over **all wood** substrates**,** also fasten the CBU with 7/8" (22mm) minimum length, non-rusting, self-imbedding wood screws. Fasten boards every 6" (150mm) at the edges and every 8" (200mm) in the field.
- Tape all the board joints with the alkali resistant 2" (50mm) wide reinforcing mesh provided by the CBU manufacturer imbedded in the same mortar or epoxy adhesive used to install the ceramic tile, stone or thin brick (see below).
- To prevent water leakage through the floor, apply a LATICRETE® waterproofing membrane (e.g. HYDRO BAN®) over the CBU before installing ceramic tile, stone or thin brick (refer to Data Sheets 236.0, 663.0, 663.5, 105.5, and WPAF.5 for additional information).
- Install the ceramic tile, stone or thin brick in the following manner:
  Wipe CBU with a damp sponge to remove dust and to increase working/adjustability time over hot, dry surfaces. Apply the mortar or epoxy adhesive, using the flat side of the trowel to work the material into good contact with the CBU. Then comb on additional mortar or epoxy adhesive with the notched side of the trowel. Spread only as much mortar or epoxy adhesive as can be covered in 15–20 minutes. Use the correct size notched trowel and "back butter" the tiles if necessary to achieve the correct coverage and bedding. "Back butter" all tile larger than 8"x 8" (200mm x 200mm) in facial area. Beat the tiles into the mortar or adhesive with a rubber mallet or beating block. Check your bond periodically by removing a tile and verifying the extent of coverage – insure that tiles are fully bedded with a minimum 3/32" (2.5mm) thick continuous layer of mortar or epoxy adhesive.
- Once the tiles set firm, grout with:
  SPECTRALOCK® PRO Premium Grout ᐃ;
  SPECTRALOCK PRO Grout;
  PERMACOLOR® Select^;
  PERMACOLOR Grout;
  PLASMA™;
  LATAPOXY® SP100;
  1500 Sanded Grout and 1776 Grout Enhancer; or,
  1600 Unsanded Grout and 1776 Grout Enhancer.
- For full installation information, refer to individual product package instructions and Data Sheets.
- **Caution: use LATAPOXY 300 Adhesive to install moisture sensitive marble, resin-backed tile and stone, and agglomerates.**
- **Caution: to install white or light colored stone, use _white_ 272 Mortar, 317 or 220 Marble & Granite Mortar (mixed with the Latex Additives indicated above) or _white_ 254 Platinum, 254R Platinum Rapid, 255 MULTIMAX™ ^, 4-XLT, SURE SET™, 253 Gold, 253R Gold Rapid or 252 Silver.**

INTERIOR WALLS OVER WOOD FRAMING*
- Fasten the CBU with 7/8" (22mm) minimum length, non-rusting, self-imbedding screws for wood studs. Fasten the boards every 6" (150mm) at the edges and every 8" (200mm) in the field.
  Tape all the board joints with the alkali resistant 2" (50mm) wide reinforcing mesh (provided by the CBU manufacturer) imbedded in the same mortar used to install the ceramic tile, stone or thin brick (see below).
- To prevent water leakage through walls, especially in bathroom areas such as tub surrounds and showers, apply a LATICRETE waterproofing membrane over the CBU before installing ceramic tile, stone or thin brick (refer to Data Sheets 236.0, 663.0, 105.0, 663.5, 105.5, and WPAF.5 for additional information on the specific LATICRETE waterproofing membrane specified).
- Install ceramic tile, stone or thin brick with:
  LATAPOXY 300 Adhesive;
  LATAPOXY 210 Adhesive;
  4237 Latex Additive plus 211 Powder;
  4237 Latex Additive plus 272 Mortar;
  4237 Latex Additive plus 317 Mortar;
  3701 Mortar Admix plus 272 Mortar;
  3701 Mortar Admix plus 317 Mortar;
  333 Super Flexible Additive plus 317 Mortar*;
  333 Super Flexible Additive plus 317Mortar*;
  333 Super Flexible Additive plus 220 Marble & Granite Mortar*;
  101 Rapid Latex Admix plus 272 Mortar;
  101 Rapid Latex Admix plus 317 Mortar;
  101 Rapid Latex Admix plus 220 Marble & Granite Mortar;

255 MULTIMAX* ^;
254 Platinum;
254R Platinum Rapid;
4-XLT*;
4-XLT Rapid*;
Hi-Bond Masonry Veneer Mortar;
Masonry Veneer Mortar*;
Thin Brick Mortar*;
Glass Tile Adhesive;
253 Gold*;
253R Gold Rapid *;
252 Silver*; or,
15 Premium Mastic†

* Note: not for applications that are continuously submerged.
† Do not use in wet or continuously submerged areas.

- Apply the mortars or adhesives recommended above in the following manner:
  Wipe CBU with a damp sponge to remove dust and to increase working/adjustability time over hot, dry surfaces.
  Apply the mortar or adhesive, using the flat side of the trowel to work the material into good contact
  with the CBU. Then comb on additional material with the notched side of the trowel. Spread only as
  much material as can be covered in 15–20 minutes. Use the correct size notched trowel and "back butter" the tiles if
  necessary to achieve the correct coverage. "Back butter" all tile larger than 8"x 8" (200mm x 200mm) in facial area.
  Beat the tiles into the mortar or adhesive with a rubber mallet or beating block. Check your bond periodically by
  removing a tile and verifying the extent of coverage – insure that tiles are fully bedded with a minimum 3/32" (2.5mm)
  thick continuous layer of mortar/epoxy adhesive or minimum 1/32" (0.8mm) thick continuous layer of organic adhesive.
- Once the tiles set firm, grout with:
  SPECTRALOCK® PRO Premium Grout △;
  SPECTRALOCK PRO Grout;
  PERMACOLOR® Select^;
  PERMACOLOR Grout;
  PLASMA™
  Premium Masonry Pointing Mortar;
  Masonry Pointing Mortar;
  LATAPOXY® SP-100;
  1500 Sanded Grout and 1776 Grout Enhancer;
  1600 Unsanded Grout and 1776 Grout Enhancer.
- For full installation information, refer to individual product package instructions and Data Sheets.
- **Caution: use LATAPOXY 300 Adhesive to install moisture sensitive marble, resin-backed tile and stone, and agglomerates.**
- **Caution: to install white or light colored stone, use _white_ 272 Mortar, 317 Mortar or 220 Marble & Granite Mortar (mixed with the LATICRETE Latex Additives indicated above) or _white_ 254 Platinum, 254R Platinum Rapid, 255 MULTIMAX™, 4-XLT, 4-XLT Rapid, SURE SET™, 253 Gold, 253R Gold Rapid or 252 Silver.**

  Consult LATICRETE product data sheets for specific installation instructions.

△ United States Patent No.: 6,881,768 (and other Patents)
^   United States Invention Patent No.: 6,784,229