TILE INSTALLED OVER CONCRETE IN SWIMMING POOLS OR TANKS
317SP-2019-2021

Please refer to page 7.

SUITABLE SUBSTRATES
- Interior or exterior: cured concrete designed for no deflection when pool or tank is full.

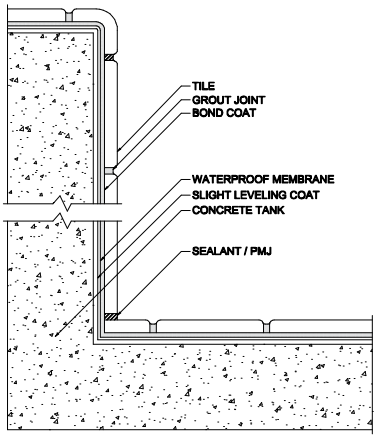
MATERIALS
- TILE
- Scratch coat mortar bed and bond coat to be single or 2 component liquid latex-Portland cement mortar (minimum acceptable standard ANSI A118.4 or ISO 13007 C2S1).
- GROUT – Latex modified grout (minimum acceptable standard ANSI A118.6 or ISO 13007 CG1) qualified for swimming pool installations, epoxy grout (minimum acceptable standard ANSI A118.3 or ISO 13007 RG).
- Waterproofing membrane (ANSI A118.10).

APPLICATION
- Apply slight levelling coat as required. Install waterproofing membrane over concrete according to manufacturers' recommendations. Installation of fittings and testing for leaks by others prior to tile work. Apply bond coat and grout as per detail 316B-2019-2021. For detail (B), install scratch coat (see Tile Guide Specification Section Mixes 2.9.2.1) and mortar bed (see Tile Guide Specification Section Mixes 2.9.2.3) in accordance with 302W-2019-2021 and 310F-2019-2021 and cure minimum of seven days, unless otherwise stated by manufacturer of pre-mixed material system. Plan for and make slopes to the bottom drains Finished tolerance of mortar bed not to exceed 6 mm in 3000 mm or 2 mm in 300 mm. Use proper notched trowel to ensure adequate bond. With pressure, apply a coat of mortar by using the trowel's flat side to key the mortar into the substrate. Apply additional mortar, combing it in a single direction parallel to the tile's shortest dimension, with the trowel's notched side. Place the tiles firmly into the wet bond coat. Push the tiles back and forth in a direction perpendicular to trowel lines, to collapse the mortar ridges and to help achieve maximum coverage. Ensure proper contact between mortar, tile and substrate by periodically lifting a few tiles to check for acceptable coverage. Use sufficient bond coat to ensure minimum 95% contact with back of tile (it may be necessary to back-butter the tile in order to meet this requirement). Beat mosaic tile into position. Remove excess mortar from the joint are as so that at least 2/3 of the tile depth is available for grouting. Allow bond coat to dry a minimum seven days before grouting. Force grout into the joints with a rubber grout float. Make sure all joints are well-compacted and free of voids and gaps. Remove excess grout from the tile surface and clean.

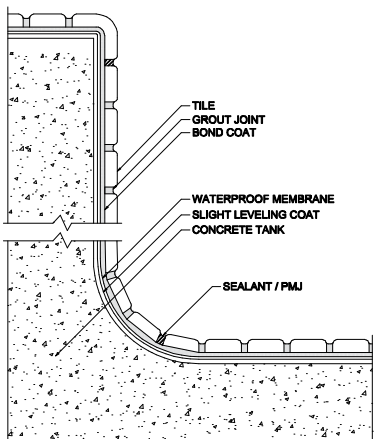
LIMITATIONS
- Ensure bond coat is compatible with waterproofing membrane.
- Manufacturer's recommendations must be followed. Exterior tile installations should not be attempted with a temperature of less than 12°C unless otherwise stated by manufacturer.
- Thin-set application substrate surface variation not to exceed 6 mm in 3000 mm and/or 2 mm in 300 mm. For large format tile where one edge is 380 mm or larger, surface variation should not exceed 3 mm in 3000 m. For a slight substrate irregularity, a latex Portland cement mortar or an epoxy mortar levelling coat may be required prior to installation by a thin-set method up to 5 mm thick and allowed to set before application of other materials. A levelling coat in excess of 5 mm should be installed with the mortar bed method. If required, the method must be specified by the consultant.

Continued

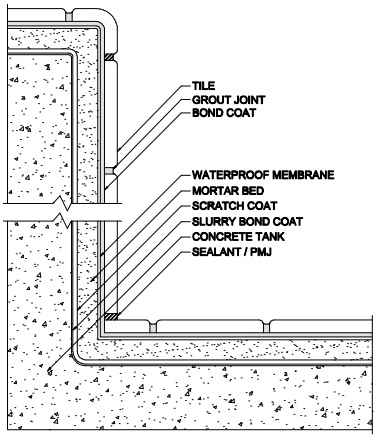
A



A2



B



OTHER CONSIDERATIONS

- Under conditions of low temperature or high humidity, drying time before grouting can vary from 14 to 60 days. Where job conditions permit, longer drying time is recommended. Swimming pools used in competition must have accurate dimensions, which may require use of detail (B) to meet tolerances. Waterproofing membrane may be eliminated if concrete tank is constructed to be watertight or if tank is installed in ground with suitable drainage provided. Provide drains to permit drainage of water at the tile surface and the surface of the waterproofing membrane. For drainage see Detail 326DR-2019-2021.
- Tile must be moisture resistant.
- Tile used on exterior applications must be frost resistant.
- Shorter curing times may be achieved with specific products as recommended by the manufacturer.
- For ease of maintenance of the movement joints during the service life of the pool consider using prefabricated movement joints (PMJ) in movement joints throughout the field of the installation and in corners.
- Refer to Notes For The Professional and 301MJ-2019-2021.
- Considering that tile installation in pool facilities are very detailed work. The installation shall be performed by skilled mechanics trained and experienced in tile work with a minimum of five years of proven experience in projects of similar size and scope. If requested by Consultant,installer shall provide a listing of previously completed projects of similar size and scope.
- All pipes and protrusions must be treated to ensure waterproof integrity.
- Proceed with a water immersion test (water-filling) to check complete waterproof qualities of the pool after the waterproofing membrane as properly cured.
  - The rate of draining and /or filling must be maintained between 60 and 75 cm/24 hours during the immersion test and any time during the first year.
  - After the first year, draining and filling rate can be increased to 1.5 m/24 hours .
  - The difference in temperature between the tiled surface and the filling water must not exceed 10°C.