

# TILE INSTALLED ON INTERIOR/EXTERIOR CEMENT MORTAR BED ON CONCRETE SLAB

## 310F-2019-2021

### DETAIL B - CHEMICAL RESISTANCE

#### SUITABLE SUBSTRATES

- Interior only concrete slab where chemical resistance is desired. Suitable for food plants, dairies, breweries and commercial kitchens. Concrete floor systems, over which the tile will be installed shall be in conformance with the Canadian National Building Code 2015 and applicable local building codes taking into consideration anticipated live and dead loads.

#### MATERIALS

- TILE
- BOND COAT – **Interior:** Portland cement slurry on concrete slab and on fresh mortar bed. 100% solids epoxy mortar (minimum acceptable standard ANSI A118.3 or ISO 13007 R1) on chemical resistant membrane on mortar bed, cured a minimum of 7 days.
- GROUT – 100% solids epoxy (minimum acceptable standard ANSI A118.3 or ISO 13007 RG).

#### APPLICATION

- Apply mortar bed (see Tile Guide Specification Section 2.9.2.5) to required thickness over fresh slurry bond coat (see Tile Guide Specification Section 2.9.2.2). Finished tolerance of mortar bed not to exceed 6 mm in 3000 mm or 2 mm in 300 mm. For large format tile where any side is greater than 380 mm surface variation should not exceed 3 mm in 3000 mm and 1.5 mm in 600 mm. For tile with any edge longer than 380 mm use sufficient bond coat to ensure minimum 95% contact, with the corners and edges fully supported. Apply chemical resistant membrane to mortar bed as recommended by manufacturer. Apply bond coat to mortar bed surface. Use proper notched trowel to ensure adequate bond. 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 on exterior installations and wet areas (it may be necessary to back-butter the tile in order to meet this requirement) and minimum 80% on interior dry areas. Remove excess mortar from the joint areas so that at least 2/3 of the tile depth is available for grouting. Allow bond coat to cure. 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

- Thickness of the mortar bed should be 32 mm minimum.
- Epoxy grout should not be used where subjected to heat surpassing 100°C or as per manufacturer's recommendations. Use furan resin grout for areas subjected to excessive heat.

#### OTHER CONSIDERATIONS

- Refer to Notes For The Professional and 301MJ-2019-2021.
- Movement joints must be chemical resistant sealant or prefabricated movement joints.
- Waterproofing membrane if required must be specified. (ANSI A118.10) Follow manufacturer's recommendations.
- Uncoupling Membrane – follow manufacturer's recommendations. Please see page 31 for more information.
- For moderate commercial to industrial applications for tile that are larger than 300 mm x 300 mm, a minimum of 95% coverage must be achieved.

