

TILE OVER HEATED FLOOR SYSTEMS

314F-2019-2021

DETAIL G – MODULAR SCREED SYSTEM

SUITABLE SUBSTRATES

- Interior or exterior concrete slabs. Floor systems over which the tile is 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:** Dry-set mortar (minimum acceptable standard ANSI A118.1 or ISO 13007 C1), latex-Portland cement mortar (minimum acceptable standard ANSI A118.4 or ISO 13007 C2). **Exterior:** Two component liquid latex-Portland cement mortar (minimum acceptable standard ANSI A118.4 or ISO 13007 C2S1) or follow uncoupling manufacturer's recommendations.
- UNCOUPLING MEMBRANE – following manufacturer's recommendations.
- MODULAR SCREED PANEL – Expanded polystyrene panel with density no less than 32 kg/m³.
- GROUT – **Interior:** Portland cement, latex-Portland cement (minimum acceptable standard ANSI A118.6 or ISO 13007 CG1) or epoxy (minimum acceptable standard ANSI A118.3 or ISO 13007 RG). **Exterior:** Latex-Portland cement (minimum acceptable standard ANSI A118.6 or ISO 13007 CG1).

APPLICATION

- Apply mortar bed (see Tile Guide Specification Section 2.8.2.5) to required thickness. 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 membrane to mortar bed as recommended by manufacturer. 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 on 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 not exceed more than 25 mm above the top of the pedestals of the modular screed panel.
- Verify with manufacturer instructions about maximum weight capacity.

OTHER CONSIDERATIONS

- Refer to Notes For The Professional and 301MJ-2019-2021. Extra insulation layer may be required between concrete slab and Modular screed panel. Consult manufacturer for type and thickness.
- Heating system - design, installation and inspection by others. Pre heating and testing of the heating system needs to be done prior to the installation of the tile. The tile installation cannot be done when floor heat is in use and may need a minimum of 7 days after tile installation before the radiant heating system can be turned on. Verify with manufacturer.
- Movement joints to be installed only at the tile surface at a maximum of 3600 mm for radiant heated floors. Width and spacing to be determined by consultant or manufacturer.
- Gypsum cement may be substituted for cementitious mortar bed.
- Modular screed panel can be used without radiant heat.
- In wet areas or in exterior applications a drainage modular screed system can be used to evacuate unwanted water.
- Uncoupling Membrane – follow manufacturer's recommendations. Please see page 31 for more information.

