

TILE OVER HEATED FLOOR SYSTEMS

314F-2019-2021



Please refer to page 7.

DETAIL C1 – THIN ELECTRIC HEATING CABLE WITH CEMENTITIOUS SELF-LEVELING ON PLYWOOD INTERIOR ONLY

SUITABLE SUBSTRATES

- Floor systems, including the framing system and subfloor panels, 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 – Dry-set mortar (minimum acceptable standard ANSI A118.1 or ISO C1), latex-Portland cement mortar (minimum acceptable standard ANSI A118.4 or ISO C2S1), modified epoxy emulsion mortars, 100% solids epoxy mortar, epoxy adhesive (minimum acceptable standard ANSI A118.3 or ISO R1), or organic adhesives (minimum acceptable standard ANSI A118.3 or ISO R1).
- Crack isolation membrane – ANSI A118.12 or waterproof membrane – ANSI A118.10.
- Uncoupling system to manufacturer's recommendations.
- CEMENTITIOUS SELF-LEVELLING UNDERLAYMENT – as per manufacturer's recommendations.
- GROUT – Portland cement, latex-Portland cement (minimum acceptable standard ANSI A118.6 or ISO CG1), or epoxy grouts (minimum acceptable standard ANSI A118.3 or ISO RG).

APPLICATION

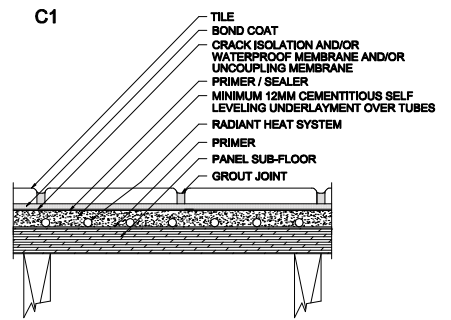
- Install electric heating cable or mat (by others).
- Primer must be used over prepared surface as required by self-leveling manufacturer's recommendations.
- Apply thickness of self-leveling to the recommended thickness by manufacturer
- Curing/drying of cementitious self-leveling must be strictly followed as instructed by manufacturer before installation of tile.
- 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 80% on interior dry areas. 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. 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

- Manufacturer's recommendations must be followed.
- Follow manufacturer's recommendations for manufacturer's maximum applied thicknesses
- Depending on Manufacturer double layer plywood may be required see Detail 313F-A.

OTHER CONSIDERATIONS

- If waterproofing/crack isolation membrane is required follow manufacturer's recommendations (ANSI A118.10, ANSI A118.12).
- 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.
- Refer to Notes For The Professional and 301MJ-2019-2021.
- Insulation layer may be required below plywood subfloor for maximum heating efficiency. Consult heating manufacturer for types and thicknesses.
- Radiant pipe/tube may be substituted for electric wire radiant heat system.
- Electric radiant heat system conforming to UL (CAN/CSA) C22.2 #217.
- Uncoupling Membrane – follow manufacturer's recommendations. Please see page 31 for more information.



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