

TILE OVER HEATED FLOOR SYSTEMS 314F-2019-2021



Please refer
to page 7.

DETAIL E – THIN-SET ON CONCRETE SLAB 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 13007 C1), latex-Portland cement mortar (minimum acceptable standard ANSI A118.4 or ISO 13007 C2S1), modified epoxy emulsion mortars, 100% solids epoxy mortar, epoxy adhesive (minimum acceptable standard ANSI A118.3 or ISO 13007 R1), or organic adhesives (minimum acceptable standard ANSI A118.3 or ISO 13007 R1).
- GROUT – Portland cement, latex-Portland cement (minimum acceptable standard ANSI A118.6 or ISO 13007 CG1), or epoxy grouts (minimum acceptable standard ANSI A118.3 or ISO 13007 RG).

APPLICATION

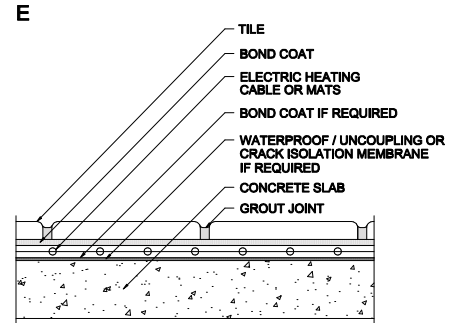
- Following installation of electric heating cable or mat (by others). Finished tolerance not to exceed 6 mm in 3000 mm or 2 mm in 300 mm. For large format tile where any side is greater than 380 mm, surface variation should not exceed 3 mm in 3000 mm and 1.5 mm in 600 mm. For tile with any edge longer than 380 mm use sufficient bond coat to ensure minimum 95% contact, with the corners and edges fully supported. 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. Remove excess mortar from the joint areas so that at least 2/3 of the tile depth is available for grouting. Allow bond coat and grout to cure as recommended by the manufacturer for the type of environment and exposure anticipated. 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.

OTHER CONSIDERATIONS

- Gypsum concrete underlayment may also be used over wood floors providing that two layers of plywood are used. See detail 313F-2019-2021 drawing (A).
- If an uncoupling system is used, one single layer of plywood minimum thickness of 20 mm is acceptable providing the floor trusses or I – joist are spaced at no more than 480 mm o.c.
- Some gypsum concrete underlayment manufacturers recommend the use of plastic lath for application over wood substrate, follow manufacturers recommendations for best practice.
- Cross bridge floor joist but preferably solid blocking.
- Refer to Notes For The Professional.
- Control joints as per detail 301MJ-2019-2021 and gypsum concrete manufacturer recommendations.
- 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.
- Uncoupling Membrane – follow manufacturer's recommendations. Please see page 31 for more information.



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