

# TILE OVER INSULATION IN REFRIGERATION ROOMS

## DETAIL A – ON MORTAR BED

320R-2009/2010

### SUITABLE SUBSTRATES

- Block-type insulation with acceptable compressive strength over masonry or concrete walls.

### MATERIALS

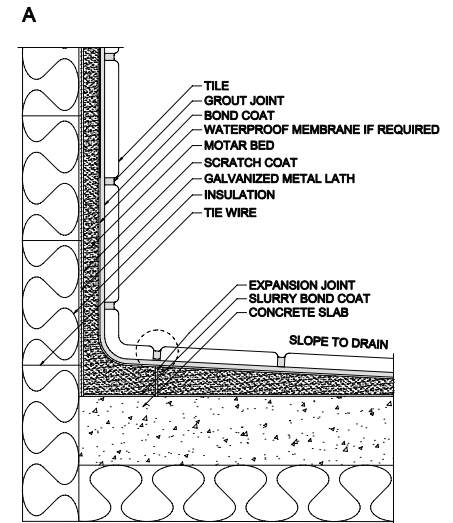
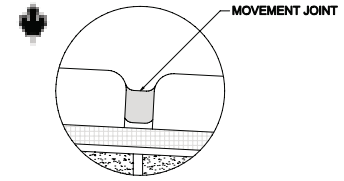
- TILE
- GALVANIZED METAL LATH - 1.4 kg/m<sup>2</sup> (ASTM C847-96)
- GALVANIZED TIE WIRE - On 305 mm o.c. through insulation for fastening metal lath.
- WATERPROOF / CRACK ISOLATION MEMBRANE (as required)  
**Flextile WP900 or WP980 Waterproof & Crack Isolation Membrane (ANSI A118.10/A118.12)**
- BOND COAT  
**Flextile 51 / 44 – two component Latex Mortar System (ANSI A118.4/A118.11)**  
**Flextile 58XT Fast Set two-component Latex Mortar System (ANSI A118.4/A118.11)**
- GROUT  
**Flextile Polymer Modified Grout (ANSI A118.7)**  
**Flextile FlexEpoxy 100 – 100% Solids Epoxy Grout (ANSI A118.3)**  
**ColourMax Plus Urethane Grout**
- Rigid polystyrene insulation CAN/ULC 5701 Type 4.

### APPLICATION

- Attach metal lath to tie wire. Apply scratch coat (see Tile Guide Specification Section Mixes 2.5.1) and let dry overnight. Apply mortar bed (minimum 25 mm for walls and 38 mm for floors) (see Tile Guide Specification Section Mixes 2.5.3 and 2.5.5). Surface variation not to exceed 6 mm in 3049 mm or 2 mm in 305 mm. Cure minimum of 72 hours. Apply tile to bond coat before bond coat skins over. Use sufficient bond coat to ensure minimum of 95% contact. Contact should be evenly distributed to give full support of the tile. Slide tile into position. Allow bond coat to cure. Force grout into full depth of joint, remove excess grout and clean.

### OTHER CONSIDERATIONS

- Design of vapour retarder and reinforced concrete slab by others. Floor should be sloped 20 mm per 1000 mm. Provide drains as required. Latex additive use in place of water is recommended for Portland cement bond coat, and may be used in modification of mortar bed.
- Drains should be designed to permit drainage of water at the tile surface and the surface of the waterproof membrane. A drainage layer may be incorporated over the waterproof membrane as recommended by the manufacturer. For drainage see Detail 326DR-2009/2010.
- Refer to Notes For The Professional and 301MJ-2009/2010.
- For thin-set applications over backer units refer to Detail B.
- Refer to Detail 319SR-2009/2010 Detail B for drain.
- If a waterproof membrane is required – See Detail B.
- For heavy vehicular traffic, confirm compressive strength of insulation by manufacturer.



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# DETAIL B – THIN-SET ON CEMENTITIOUS BACKER UNIT (CBU)

320R-2009/2010

## SUITABLE SUBSTRATES

- On solid backing block-type insulation with acceptable compressive strength.

## MATERIALS

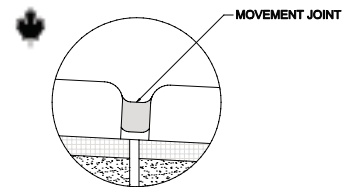
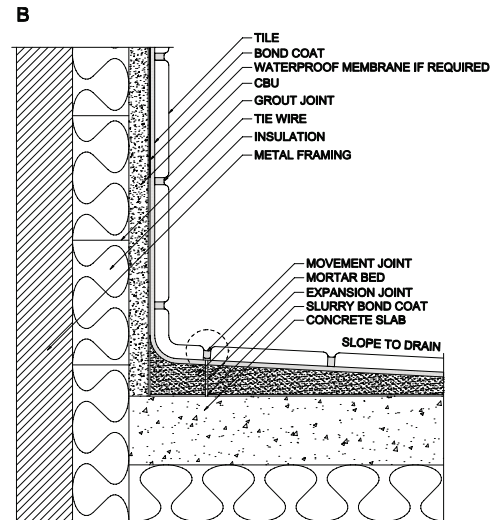
- Cementitious backer unit (CBU) (ANSI A118.9-1999) or nominal 11 mm thick fibre cement backer board meeting ASTM C1288-1999.
- TILE
- GALVANIZED TIE WIRE – On 305 mm o.c. through insulation for fastening to backing.
- Rigid polystyrene insulation CAN/ULC 5701 Type A
- WATERPROOF / CRACK ISOLATION MEMBRANE (as required)  
**Flextile WP900 or WP980 Waterproof & Crack Isolation Membrane (ANSI A118.10/A118.12)**
- BOND COAT  
**Flextile 52, 56SR, 58, 61, 62 or 66 Polymer Modified Mortar (ANSI A118.4/A118.11)**  
**Flextile 51 / 44 – two component Latex Mortar System (ANSI A118.4/A118.11)**  
**Flextile Flex-Epoxy 100 – 100% Solids Epoxy Mortar (ANSI A118.3)**  
**Flextile 58XT Fast Set two-component Latex Mortar System (ANSI A118.4/A118.11)**
- GROUT  
**Flextile Polymer Modified Grout (ANSI A118.7)**  
**Flextile FlexEpoxy 100 – 100% Solids Epoxy Grout (ANSI A118.3)**  
**ColourMax Plus Urethane Grout**

## APPLICATION

- Cementitious backer unit (CBU) must be stable, plumb, square and tied to backing. Surface variation not to exceed 6 mm in 3049 mm or 2 mm in 305 mm. Apply levelling coat if required. All joints must be taped with 51 mm fibre-mesh tape, filled with a dry-set or latex mortar and sanded. Apply thin-set bond coat to cementitious backer unit (CBU), fibre cement backer board using proper notched trowel to ensure minimum 95% contact. Slide tile firmly into position while bond coat is wet and tacky. Force grout into full depth of joint, remove excess grout and clean.

## LIMITATIONS

- Design of vapour retarder and reinforced concrete slab by others. Floor should be sloped 20 mm per 1000 mm. Provide drains as required. Latex additive use in place of water is recommended for Portland cement bond coat and may be used in modification of mortar bed.
- Drains should be designed to permit drainage of water at the tile surface and the surface of the waterproof membrane. A drainage layer may be incorporated over the waterproof membrane as recommended by the manufacturer. For drainage see Detail 326DR-2009/2010.
- Refer to Notes For The Professional and 301MJ- 2009/2010.
- Refer to Detail 319SR-2009/2010 Detail B for drain.
- Waterproof membrane if required must be specified. (ANSI A118.10-1999)
- If waterproof membrane is not specified, a slurry bond coat must be applied to concrete slab.
- For heavy vehicular traffic, confirm compressive strength of insulation by manufacturer.



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