

CERAMIC TILE FLOORING ON PANEL TYPE SUBFLOOR

ONTARIO BUILDING CODE

9.30.6. Ceramic Tile

9.30.6.1.

- (1) Ceramic tile should be set in a mortar bed or applied to a sound smooth base with a suitable adhesive.
- (2) Panel-type subfloor to which ceramic tile is to be applied with adhesive shall have its edges supported according to Article 9.23.14.3.

9.23.14.3. Edge Support

- (1) Where the edges of panel-type subflooring are required to be supported, such support shall consist of tongue-and-groove panel edges or not less than 38 mm by 38 mm blocking securely nailed between framing members.

9.30.2.1. Required Underlay

- (1) A panel-type underlay shall be provided under resilient flooring, parquet flooring, ceramic tile, felted-synthetic-fibre floor coverings or carpeting laid over lumber subflooring.
- (3) Panel-type underlay shall be provided under ceramic tile applied with adhesive.

9.30.2.3. Fastening

- (1) Panel-type underlay shall be fastened to the subfloor with staples, annular grooved flooring nails or spiral nails, spaced not more than 150 mm o.c. along the edges and 200 mm o.c. both ways at other locations.
- (2) Nails for panel-type underlay shall be not less than 19 mm long for 6mm thick underlay and 22 mm long for 7.9 mm thick underlay.
- (3) Staples for panel-type underlay shall,
 - (a) have not less than a 1.2 mm shank diameter or thickness with a 4.7 mm crown, and
 - (b) be not less than,
 - I. 22 mm long for 6 mm underlay, and
 - II. 28 mm long for 7.9 mm and 9.5 mm underlay.

9.30.2.4. Joints Offset

- (1) Where panel-type underlay is required to be installed over plywood, or OSB or waferboard, the joints in the underlay shall be offset at least 200 mm from the joints in the underlying subfloor.

9.30.2.5. Surface Defects

- (1) Underlay beneath resilient or ceramic floors applied with an adhesive shall have all holes or open defects on the surface patched so that the defects will not be transmitted to the finished surface.

OBJECTIVE

Floor movement is the principal cause of the tile and grout cracking. A strong structural floor framing and subfloor is the key for a durable ceramic tile installation. The scratch coat method described in the Building Smart bulletin published by the Ontario New Home Warranty Program is widely accepted across Ontario. The detail below is an example of the "scratch coat method" for installing ceramic tiles on panel type subfloor.

