
Part 1 General

1.1 RELATED DOCUMENTS

- .1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY OF WORK

- .1 Work Included: The work of this Section includes the provision of all labour, materials, equipment and services required to install ceramic floor and wall tile, as indicated on the drawings, as specified herein and as required for a complete project
- .2 Related Sections:
 - .1 Concrete sections under separate cover.
 - .2 Section 06 10 10 - Architectural Rough Carpentry.
 - .3 Section 07 92 00 - Joint Sealants.
 - .4 Section 09 21 16 - Gypsum Board Assemblies.

1.3 REFERENCES

- .1 American National Standards Institute (ANSI):
 - .1 ANSI/TCNA A108/A118/A136.1-2024, American National Specifications for the Installation of Ceramic Tile.
- .2 Terrazzo Tile and Marble Association of Canada (TTMAC):
 - .1 2021/2023 TTMAC Tile Specification Manual.

1.4 SUBMITTALS

- .1 General: Submit each item in this Article according to the Conditions of the Contract and the applicable Division 01 Specification Sections.
- .2 Samples: Submit duplicate samples of each type of tile, grout and trim proposed for use.
- .3 Maintenance Data:
 - .1 Provide maintenance data for cleaning and maintenance of ceramic and quarry tile floors and walls for incorporation into manual specified in Section 01 78 23 "Operation and Maintenance Manual".
- .4 Maintenance Material
 - .1 Provide maintenance materials in accordance with Section 01 78 00 "Closeout Submittals".
 - .2 Provide two (2) unopened cartons of each type and colour of tile and base required for the project, for maintenance use. Store where directed.
 - .3 Maintenance material to be of same production run as installed material.
 - .4 Do not use maintenance materials for the correction of deficiencies or remedial work during the warranty period.

1.5 ENVIRONMENTAL CONDITIONS

- .1 Maintain air temperature and structural base temperature at ceramic tile installation area above 12°C for 48 hours before, during, and 48 hours after, installation.

1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Cooperate with the Waste Management Coordinator in the implementation of the Waste Management Plan specified in Section 01 74 21 "Waste Management and Disposal".
- .2 Handle and dispose of waste materials generated by the work of this Section, including packaging materials, in accordance with the Waste Management Plan.

Part 2 Products

2.1 MANUFACTURERS

- .1 The surface preparation materials, setting bed, and grout specification is based on products by Mapei Inc.
- .2 Subject to compliance with the specification requirements, equivalent products by the following manufacturers are acceptable alternatives:
 - .1 Laticrete International Inc.
 - .2 Alpha-Vico Canada Ltd.
 - .3 TEC Inc., and H.B. Fuller Company, distributed by Centura.
- .3 Requests for substitutions will be considered in accordance with provisions of Section 01 25 00 - "Substitution Procedures". Acceptance of alternative products is subject to the approval of the Consultant.

2.2 TILE

- .1 Floor tile: Refer to Interior Design Package under separate cover.
- .2 Wall tile: Refer to Interior Design Package under separate cover.
- .3 Neatly cut and grind edges of tiles as required, at bases and at edges at exposed perimeters of tiling.
- .4 All cut edges shall be machine-cut and arises (edges) shall be ground and bevelled to match manufactured edges.

2.3 SURFACE PREPARATION MATERIALS

- .1 Spot patching and build up 13 mm or less: Ultra/Plan self-levelling cementitious underlayment compound.

- .2 Build-up greater than 13 mm: Planicrete 50 additive with sand/cement mortar.

2.4 SETTING MORTARS AND ADDITIVES

- .1 Kerabond dry set mortar.
- .2 Keralastic polymer additive.

2.5 WATERPROOFING MEMBRANE

- .1 Soft polyethylene membrane with fleece webbing laminated on both sides; use special cut-width rolls and special shapes for corners and pipe sleeves, to ANSI A118.10. Standard of acceptance: "Kerdi" by Schlüter Systems (Canada) Inc.

2.6 UNCOUPLING MEMBRANE

- .1 8 mm thick, orange, high-density polypropylene membrane with a cut-back grid structure of square cavities, each cut back in a dovetail configuration, and an anchoring fleece laminated to the underside. Conforms to TTMAC definition of uncoupling membranes. Standard of acceptance: "Ditra" by Schlüter Systems (Canada) Inc.

2.7 GROUTS AND ADDITIVES

- .1 Grout: Keracolor/Wall unsanded, or Keracolor/Floor sanded, as applicable.
- .2 Additive: Plastijoints acrylic grout additive.
- .3 For grout colours refer to the Interior Design Package.

Part 3 Execution

3.1 PREPARATION

- .1 Apply tile or backing coats to clean and sound surfaces which are true to line, plumb, level or uniformly sloping to floor drains, as applicable.
- .2 Use patching and/or levelling compounds, in accordance with manufacturer's instructions, to correct any defects in the substrate.
- .3 Ensure that floor drains are in place before installation of floor tiles.

3.2 WORKMANSHIP

- .1 Install ceramic tile in strict accordance with the manufacturer's instructions.

- .2 Fit tile around corners, fitments, fixtures, and other built-in objects. Maintain uniform joint appearance. Cut edges smooth and even.
- .3 Maximum surface tolerance 1:800.
- .4 Make joints between tile uniform, plumb, straight, true, even and flush with adjacent tile. Ensure sheet layout not visible after installation. Align patterns.
- .5 Except where otherwise indicated, lay out tiles so perimeter tiles are minimum 1/2 size.
- .6 Sound tiles after setting and replace hollow- sounding units to obtain full bond.
- .7 Make internal angles square. Make external angles with rounded bullnosed profile.
- .8 Clean installed tile surfaces after installation and grouting cured.
- .9 Make control joints where indicated. Install divider strips in accordance with the manufacturer's instructions.

3.3 TILE INSTALLATION

- .1 Install ceramic tiles in accordance with applicable TTMAC details.

3.4 WATERPROOFING MEMBRANE INSTALLATION

- .1 Apply waterproofing membrane to all walls enclosing tubs and showers and where indicated on the drawings.
- .2 Apply specified thin-set mortar to the substrate using a 4.5 mm V-notch trowel.
- .3 Work waterproofing membrane into adhesive with a flat trowel to achieve full contact and to remove air pockets.
- .4 Overlap and seal membrane seams a minimum 50 mm. Tightly butt adjacent sheets and cover with a 125 mm strip of waterproofing membrane sealed to primary membranes.
- .5 Provide strips of waterproofing where required to span expansion joints or terminate waterproofing into movement-joint type tile-setting accessories, as detailed in accordance with the manufacturer's instructions.
- .6 Adhere waterproofing membrane to fixtures, joints around pipes, and other penetrations with transparent waterproof sealant.
- .7 Where applicable, at the interface with the uncoupling membrane on the floor, lap the materials to ensure continuity of the waterproof barrier.

3.5 UNCOUPLING MEMBRANE INSTALLATION

- .1 Install uncoupling membrane at all floors.
- .2 Apply specified thin-set mortar (mixed to a fairly fluid consistency, but still able to hold a notch) to the substrate using a using a 6 mm x 5 mm V-notched trowel or the manufacturer's recommended 4.5 mm x 4.5 mm square-notched trowel.
- .3 Apply the uncoupling membrane to the floor, fleece side down. Solidly embed the matting into the mortar using a float, screed trowel, or the manufacturer's recommended roller, making sure to observe the open time of the bonding mortar. If the mortar skins over prior to matting installation, remove and reapply.
- .4 Back-roll the end of the matting before installation, or place boxes of tile on top of the matting after installation, to avoid curling.
- .5 When using the manufacturer's recommended roller, place a weight (e.g. bags of mortar/grout or box of tile) not to exceed 34 kg on the roller shelf. Slowly move the roller from one end of the matting to the other, slightly overlapping successive passes.
- .6 Lift up a corner of the matting to check coverage. Proper installation results in full contact between the fleece webbing and the thin-set mortar. Simply abut end and side sections of adjacent sheets.
- .7 Be advised that coverage may vary with mortar consistency, angle at which the trowel is held, substrate flatness, etc. If full coverage is not achieved, remove and reapply, making sure to verify proper mortar consistency and application. In some cases it may be beneficial to use a trowel with larger notches, such as a 6 mm x 6 mm square-notched trowel.
- .8 Where applicable, at the interface with the waterproofing membrane on the walls, lap the materials to ensure continuity of the waterproof barrier.
- .9 Tile can be installed over the uncoupling membrane immediately; no need to wait for the mortar to cure.
 - .1 Fill the cut-back cavities with unmodified thin-set mortar and comb additional mortar over the matting using a trowel that is appropriate for the size of the tile.
 - .2 Solidly embed the tiles in the setting material.
 - .3 Periodically remove and check a tile to ensure that full coverage is being attained.
 - .4 Back butter where necessary to ensure proper coverage, particularly when installing large-format tiles (e.g. 300 mm x 300 mm and larger).

3.6 CLEANING

- .1 Upon completion of the installation remove from the premises all surplus material, dirt and debris caused by the work of this Section and leave the installation clean and ready for the intended use by the Owner.

- .2 Clean any drippage and spills of surplus material from adjacent surfaces and make good any damage caused by the work of this Section.
- .3 Make good damage to other work caused by the Work of this Section.
 - .1 Execute repair work in accordance with the original manufacturer's written instructions.

END OF SECTION