

9 FINISHES

9.1 General

- 9.1.1 Glazed Ceramic Tile shall comply with British Standard specification No. 1281 and shall be approved sizes as shown on Drawings and the product of a reputable manufacturers approved by the Consultant.
- 9.1.2 Unglazed Ceramic Tile shall comply with the requirements of British Standard No.1286 and shall be of approved sizes as shown on the drawings and the product of a reputable manufacturer.

9.2 Manufacturers

- 9.2.1 All tiles, ceramic or homogenous, for the project shall be manufactured by one of the following manufacturers.

1	Guocera Cermiche of Spain
2	Horse brand Ceramic of Malaysia
3	R.A.K Ceramic of United Arab Emirates

Tiles from manufacturers not listed above shall only be used with prior written approval of the Consultant.

9.3 Ceramic and Vitreous Tile Materials

9.3.1 Ceramic and Vitreous clay Wall Tiles

- 9.3.1.1 All tiles for wall installation shall have cushion edge, impervious porcelain and highly glazed surface. Colours shall be as selected by the Consultant and shall include trimmers, corner pieces, bull nose and all other special shapes indicated or required. All this shall be free from flaws, cracks and crazing.

9.3.2 Floor Ceramic and Vitreous Tiles

- 9.3.2.1 Non-slip ceramic tile for shall be used on all floor locations. Floor tiles shall be specially prepared for floor use but shall have all the qualities of ceramic tiles listed above for wall use.

9.4 Mortar Materials

- 9.4.1 Standard brand of light gray or white Portland cement as specified in drawings, conforming to current British Standard specifications shall be used.
- 9.4.2 Sand shall be clean, sharp, river sand, conforming to British Standard Specifications and graded fine to coarse within the following limits: 100% passing 8 sieve, 90% to 100% passing 16 sieve, 60% to 90% passing 30 sieve, 25% to 55% passing 50 sieve and 0% to 15% passing 100 sieve.

9.5 Cement Colour

- 9.5.1 Dry cement colour, chemically inert, non fading, alkalifast, mineral pigment, as approved shall be used wherever refinished.

9.6 Waterproofing

- 9.6.1 Floors of toilet areas, corridors and planter boxes shall be treated with an appropriate water proofing coating, approved by the Consultant

9.7 Installation Requirements

- 9.7.1 As far as possible, tile lay out work should be in such a way that no tiles less than half size occurs.
- 9.7.2 Align joints in wall tile vertically and horizontally except where other patterns are shown or specified, Align joints in floor tiles at right angles to each other straight with walls to conform to the patterns selected.
- 9.7.3 Verify locations of accessories before installing tiles. Work shall be coordinated with plumbing and other trades before starting of tile work.
- 9.7.4 Installation of ceramic and vitreous tile shall be in accordance with manufacturer's instructions.

9.8 Floor Tile Installation

- 9.8.1 All ceramic and vitreous clay tile floors shall be in Portland cement setting beds. Concrete surfaces shall be cleaned and surface of concrete shall be wetted prior to placing of setting bed mortar. Tiles shall be immersed in water for minimum of 4 hours before laying.
- 9.8.2 Setting Bed Mortar Mix: shall consist of one (1) part Portland cement and two (2) parts dry sand, by volume, to which not more than 1/10 part of hydrated lime may be added.
- 9.8.3 When mixed with water, the mortar mix shall be of such consistency and workability as to produce maximum density. Determine consistency by stroking the mortar surface with a trowel. Where of correct consistency, the trowelled surface readily assumes a smoothed, slickened appearance.
- 9.8.4 Spread setting bed mortar and screed to provide smooth, dense beds with true planes pitched to drains. The thickness of bed shall be such that the floor tile will finish flush with adjacent finished flooring, but bedding shall have average thickness of 38 mm.
- 9.8.5 After bed has set sufficiently to be worked over, trowel or brush a thin layer, 3mm in thickness, of neat Portland cement paste over the surface of the back of tile.
- 9.8.6 Do not prepare larger setting bed than can be covered with tile before the mortar sets.
- 9.8.7 Press tile firmly into the bed tapping with wood blocks to obtain firm bedding of total tile area and a smooth top surface.
- 9.8.8 All tiles shall be properly aligned with straight joints in even widths. Joints width shall be determined by spacers on ceramic tiles. Tamping shall be completed within one (1) hour after placing tile. Adjust work out of line within this period.
- 9.8.9 Tiles shall be fitted closely around pipes running through walls and floors. Pitch floors to drains.

9.9 Wall Tile Installation

- 9.9.1 Base Plaster 13 mm thick applied to masonry wall shall be one-part Portland cement, three-parts of river sand by volume. Where additional thickness build-up is required to conform to indicated lines, apply as separate coat at no cost to employer.

- 9.9.2 Setting bed of tiles shall be done with cement slurry. The thickness of slurry bed shall be 3 mm thick minimum for setting tiles and walls.
- 9.9.3 Installation of tiles shall be in accordance with standards and applicable requirements previously specified for floor tile.
- 9.9.4 Tiles shall be installed in perfect vertical plumb and as per the pattern and joints if shown on drawings

9.10 Grouting

- 9.10.1 Grouting shall not commence for at least 24 hours after placing of tiles.
- 9.10.2 Grout for floor and wall ceramic and vitreous tiles shall be waterproof, neat white Portland cement with dry cement colour added as directed by the Consultant. If white grout is selected, cement shall be white.
- 9.10.3 Grout mixed to a creamy consistency in accordance with manufacturer's directions shall be used for joint filling. Maximum width of joints shall be 3 mm.
- 9.10.4 Force maximum grout into the joints with trowel. Before grout sets, strike or tool joints to base of cushion and fill all skips and gaps. Do not permit setting bed materials to show through grouted joints.
- 9.10.5 Cure grout joints by maintaining damp condition for three (3) days by sponging down, or other methods approved by the Consultant. Allow floors to set 48 hours before permitting ordinary foot traffic.

9.11 Defects in Tiles and Tile Laying

- 9.11.1 The surface of all tiled floors shall be perfectly in level and shall be executed by experienced workers in the field of tile laying.
- 9.11.2 A sample panel of laid tiles of each type shall be approved by the Consultant before commencement of tile laying.
- 9.11.3 Mismatches of colour, chipped or damaged tiles installed by the Contractor shall be rejected and shall have to be replaced by the Contractor at his own cost and risk.
- 9.11.4 14.10.4 Mismatches of colour in tiles installed by the Contractor shall be rejected and shall have to be replaced by the Contractor at his own cost and risk.

9.12 Guarantees

- 9.12.1 Manufacturer shall provide his standard guarantees for work under this section. However, such guarantees shall be in addition to not in lieu of all other liabilities which manufacturers and Contractor may have by other provisions of the Contract Documents.