8 UNIT MASONRY FLOORING

8.1 GENERAL

8.1.1 Scope

1 This Part specifies requirements for interior and unit masonry flooring, set in mortar on a rigid base.

2 Related Parts and Sections are as follows:

This Section

Part 1..... General
Part 5..... Tiles
Part 6..... Terrazzo
Part 7..... Stone Flooring
Part 9..... Floor Screeds and Treatments
Part 10..... Joint, Caulking and Sealants

Section 1 General
Section 5 Concrete
Section 13 Masonry

8.1.2 References

1 The following standards are adopted and/or referred to in this Section:

ASTM C144 .....Standard Specification for Aggregate for Masonry Mortar

ASTM C270 .....Standard Specification for Mortar for Unit Masonry

ASTM C387/C387M ...Standard Specification for Packaged, Dry, Combined Materials for Concrete and High Strength Mortar.

ASTM C404 .....Standard Specification for Aggregates for Masonry Grout

ASTM C410.....Standard Specification for Industrial Floor Brick

ASTM C476 .....Standard Specification for Grout for Masonry

ASTM C887 .....Standard Specification for Packaged, Dry, Combined Materials for Surface Bonding Mortar

ASTM C1142.....Standard Specification for Extended Life Mortar for Unit Masonry

ASTM C1180.....Standard Terminology of Mortar and Grout for Unit Masonry

ASTM C1384.....Standard Specification for Admixtures for Masonry Mortars

ASTM C1438.....Standard Specification for Latex and Powder Polymer Modifiers for use in Hydraulic Cement Concrete and Mortar.

ASTM C1731.....Standard Specification for Concrete Floor Tile

ASTM C1732.....Standard Practice for Installation of Concrete Floor Tiles

BS 1199 and BS 1200 Specifications for building sands from natural sources; (EN 13139 Aggregates for mortar)

BS 6073 .....Precast concrete masonry units; (BS 6073-2 Precast concrete masonry units - Guide for specifying precast concrete masonry units; EN 771-3 Specification for masonry units - Aggregate concrete masonry units (Dense and lightweight aggregates); EN 772-2 Methods of test for masonry units - Determination of percentage area of voids in masonry units (by paper indentation); EN 1338 Concrete paving blocks - Requirements and test methods; EN 1339 Concrete paving flags - Requirements and test methods; EN 1340 Concrete kerb units - Requirements and test methods; ASTM C902 Standard Specification for Pedestrian and Light Traffic Paving Brick; ASTM C936/C936M Standard Specification for Solid Concrete Interlocking Paving Units; ASTM C1272 Standard Specification for Heavy Vehicular Paving Brick)

EN 197-1 .....Cement - Part 1: Composition, specifications and conformity criteria for common cements

EN 413-1 .....Masonry cement - Part 1: Composition, specifications and conformity criteria

EN 998-2 .....Specification for mortar for masonry - Part 2: Masonry mortar

EN 13139 .....Aggregates for mortar

8.1.3 Allowable Tolerances

1 Floor surfaces are to be level and true to plane. The tolerance for deviation shall not be more than a 3 mm over a distance 3 m.

2 Joint width deviation shall not be greater than 10 % of dimension indicated in the project Documentation.

8.1.4 Submittals

1 In accordance with the relevant provisions of Section 1, General, the Contractor is to furnish the following:

(a) samples: five individual samples of unit masonry flooring showing extent of variations in colour and texture

(b) shop drawings: showing special brick shapes and construction patterns.

8.1.5 Product Delivery, Storage and handling

1 Materials shall be delivered and stored on Site in their original sealed containers marked with name of manufacturer and identification of contents.

2 The Contractor is to store materials under waterproof covers on planking clear of ground.

8.2 MATERIALS

8.2.1 Unit Masonry

1 Unit masonry or paving bricks shall comply with BS 6073 or adopted standard.

8.2.2 Other Materials

1 Sand shall comply with the relevant provisions of BS 1199 and BS 1200, EN 13139, ASTM C144 or ASTM C404.

2 Cement shall comply with the relevant provisions of EN 197-1 or adopted standard.

3 Colouring pigments shall be pure mineral pigments. They shall be lime proof and non-fading and shall be added to grout or mortar by the manufacturer. In-situ coloured grout or mortar is not acceptable unless otherwise agreed by the Engineer.

8.2.3 Mortar

1 Mortar shall comply with the relevant provisions of EN 998-2 or ASTM C270.

8.2.4 Grout

1 Grout shall consist of one part cement to three parts sand by volume, mixed with enough water for flowability.

8.3 EXECUTION OF WORK

8.3.1 Inspection

1 The Contractor is to inspect the substrate and make sure that it is without voids or projections that would interfere with installation of brick or other unit masonry paving.

8.3.2 Application

1 The use of unit masonry with chips, cracks, discoloration or other visible defects is not permitted.

2 Installation with cement grout.

(a) spread the mortar setting bed mixture 12 mm to 25 mm in thickness to a true plane

(b) limit the setting bed to minimum amount which can be covered with brick before the initial setting

(c) apply 0.75 mm layer of neat cement paste over the setting bed, set and level each unit immediately and tamp bricks to completely contact the setting bed

(d) grout the joints as soon as the initial set is achieved; place the grout in joints, strike flush and tool to form slightly concave finish

(e) cure the grout by maintaining in a damp condition for seven days.

3 Installation with cement mortar:

(a) install bricks in a full mortar bed, remove excess mortar and strike the joints flush with top surface or stone and tool to form a slightly concave finish

(b) cure the mortar by maintaining in a damp condition for seven days.

END OF PART