

**SECTION 07 32 13
CLAY ROOF TILES**

SPEC WRITER NOTE: Use this section only
for NCA projects

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies the installation of roofing tiles.
- B. Related work
 - 1. Metal Flashing: Section 07 60 00, FLASHING AND SHEET METAL.
 - 2. Style, size, exposure, color and texture of clay tile: Section 09 06 00, SCHEDULE FOR FINISHES.
 - 3. Sealants and Applicable: Section 07 92 00, JOINT SEALANTS.

1.2 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Samples: Tiles to show color range.
- C. Shop Drawings: Details of fabricated custom shapes.

1.3 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver tiles and setting materials in manufacturer's original, unopened containers clearly identifying manufacturer and the contents.
- B. Do not store tiles in flat position.

1.4 WARRANTY

Warrant materials and workmanship to be free from defects and leaks and subject to the terms of the "Warranty of Construction", FAR clause 52.246-21, except that warranty period is two years.

1.5 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American Society for Testing and Materials (ASTM):
 - A580-08.....Stainless Steel Wire
 - B99-06.....Copper - Silicon Alloy Wire for General Applications
 - C270-12.....Mortar for Unit Masonry
 - C920-11.....Elastomeric Joint Sealants
 - C1167-03(R2009).....Clay Roof Tiles
 - D226-09.....Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing
 - D4586-07.....Asphalt Roof Cement, Asbestos Free
 - F1667-11.....Driven Fasteners: Nails, Spikes, and Staples

PART 2 - PRODUCTS

SPEC WRITER NOTES:

1. Delete between // _____ // if not applicable.
2. Make material requirements agree with applicable requirements (types, grades, classes and other related items) specified in the referenced Applicable Publications.
3. Select clay tile type desired (English, French, Greek, Mission, Roman or Spanish) and insure tile are clearly detailed on drawings especially edge and flashings at penetrations and hips and valleys.
4. Insure wood deck is not less than 19 mm (3/4 inch) thick.

2.1 CLAY ROOF TILES

- A. ASTM C1167, Grade 1, providing resistance to severe frost action, Type I, High profile, Type II, low profile, Type III, other, including flat.
- B. Special shapes: Eave closures, under eave piece, gable rake, and hands, valley, ridge covers, top fixtures, and other shapes required.
- C. For repairs, match existing tile for color and shape.

2.2 ROOF CEMENT

- A. ASTM D4586, Type II.
- B. Modified bituminous types are acceptable.

2.3 NAILS BRADS, STAPLES AND SPIKES

- A. ASTM F1667.
- B. Nails: Type I, Style 23, Hard copper roofing nails length for 19 mm (3/4 inch) penetration into deck.
- C. Staples: Type IV, Style 3, Flat top crown staple, zinc coated.

2.4 FELT UNDERLAYMENT

- A. ASTM D226, Type II, nominal 13.6 kg (30 pounds.)
- B. Without perforations.

2.5 MORTAR

- A. ASTM C270.
- B. Type N or 0.

2.6 SEALANT

- A. ASTM C920, Type S or M, Grade NS Class 25.
- B. Use Polyurethane, Shore hardness 15-25.

2.7 WIRE

- A. Stainless steel: ASTM A580, Type 302 or 304, minimum 0.74 mm (0.029 inch) diameter.
- B. Copper: ASTM B99, minimum 1.27 mm (0.05 inch) diameter.

PART 3 - EXECUTION**3.1 JOB CONDITIONS**

- A. Do not set tiles in mortar when the ambient temperature is less than 4 °C (40 °F).
- B. Do not start installation until other trades requiring traffic on roof have completed their work.
- C. Do not start installation until vent pipes and other projections through roofs and flashing materials are in place.

3.2 LAYING FELT UNDERLAYMENT

- A. Lay single thickness of felt parallel to eaves with double thickness at hips, valleys, and ridges, under tile roofing.
- B. Lap horizontal joints 75 mm (3 inches) and vertical joints 150 mm (6 inches) with vertical joints staggered. Lap in direction of flow.
- C. Extend felt up 150 mm (6 inches) at abutting vertical walls, chimneys and parapets.
- D. Lap felt not less than 100 mm (4 inches) under edges at built-in gutters, valleys, flashing, and metal flashings.
- E. Staple felt 125 mm (5 inches) on centers along laps and edges.

3.3 LAYING TILE

- A. Lay courses parallel with eaves.
- B. Do not stretch courses.
- C. Space course to finish even and parallel at top of level terminations.
- D. Fit tiles closely at ridges, around vent pipes, flashing and other like projections through roof.
- E. Secure tile by at least two nails, where practicable.
- F. Use copper or stainless steel wire fastening where nails are not used through tile.
- G. Cover nails and wire fastenings in finished work.
- H. Lay tile with an end lap of at least 75 mm (3 inches).
- I. Recess eave closure of pan and cover tile at least 38 mm (1-1/2 inches) from lower end of tile.
- J. Fill laps of ends bands, of cover tile on ridges, and of gable rakes to end bands and field tiles with roof cement.
 - 1. Limit amount of roof cement used for leveling tile to 6 mm (1/4 inch) thickness.
 - 2. Use mortar for leveling and bedding tile where thickness exceeds 6 mm (1/4 inch).
- K. Use sealant for pointing around eave closures ridge cover joints, and top fixtures.

1. Apply sealant cap bead over exposed fasteners sealing opening.
 2. Apply as specified in Section 07 92 00, JOINT SEALANTS.
- L. Coordinate with Section 07 60 00, FLASHING AND SHEET METAL for installation of flashing with tile work. Keep flashing concealed except where exposed on vertical surfaces or Counterflashing (cap).

3.4 CLEANING AND REPAIR

- A. Upon completion remove any cement splatter from tile and adjacent surfaces.
- B. Replace broken, cracked, or stained tile with discolored surface.

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