



By CTS Cement Manufacturing Corp.

CSI SECTION 09 30 00 – TILE AND STONE SETTING MATERIALS AND ACCESSORIES

Polymer Modified, Cementitious Tile Setting Mortar

EDITOR NOTE: The following guideline specification has been prepared to assist architects and design professionals in the preparation of project master specifications. It is intended for use by qualified design professionals and is not intended to be used verbatim. Appropriate modifications to meet specific project requirements are required. Make appropriate [selections] where options are provided and delete items that are not applicable to the project. Contact CTS Cement Technical Service for additional information or project specification assistance.

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Supply and installation of an early strength, tile setting mortar in new construction and rehabilitation of existing structures.

1.2 RELATED SECTIONS

- [A. Section 03 30 00 – Cast-in-Place Concrete
- [B. Section 03 38 00 – Post-Tensioned Concrete
- [C. Section 03 54 00 – Cast Underlayment
- [D. Section 04 20 00 – Unit Masonry
- [E. Section 05 40 00 – Cold-Formed Metal Framing
- [F. Section 05 42 00 – Cold-Formed Metal Joist Framing
- [G. Section 06 11 00 – Wood Framing
- [H. Section 07 14 00 – Fluid-Applied Waterproofing
- [I. Section 09 26 00 – Gypsum Board Systems
- [J. Section 09 28 00 – Backing Boards and Underlayments
- [K. Section 09 30 00 -- Tiling
- [L. Section 09 31 33 – Thin Set Tiling
- [M. Section 09 32 00 – Mortar-Bed Tiling

1.3 REFERENCES

- A. ANSI A108 Series/A118 Series – American National Standards for Installation of Ceramic Tile.
- B. ANSI A108.01 General Requirements: Subsurfaces and Preparations by Other Trades.
- C. ANSI A108.02 General Requirements: Materials, Environmental, and Workmanship.
- D. ANSI A108.1A Installation of Ceramic Tile in the Wet Set Method with Portland Cement Mortar.
- E. ANSI A108.1B Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set or Latex-Portland cement Mortar.
- F. ANSI A108.5 Installation of Ceramic Tile with Dry-Set Portland cement Mortar or Latex-Portland Cement Mortar.
- G. ANSI A108.6 Installation of Ceramic Tile with Chemical Resistant, Water Cleanable Tile Setting and Grouting Epoxy.
- H. ANSI A108.10 Installation of Grout in Tilework.
- I. ANSI A108.11 Specifications for the Installation of Interior Cementitious Backer Units.



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- J. ANSI A108.13 Installation of Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone.
- K. ANSI A108.14 Installation of Paper-Faced Glass Mosaic Tile.
- L. ANSI A108.15 Alternate Method: Installation of Paper-Faced Glass Mosaic Tile.
- M. ANSI A108.16 Installation of Paper-Faced, Back-Mounted, Edge Mounted, or Clear Film Face-Mounted Glass Mosaic Tile.
- N. ANSI A108.17 Installation of Crack Isolation Membranes.
- O. ANSI A118.1 Specifications for Dry-Set Portland Cement Mortar.
- P. ANSI A118.3 Specifications for Chemical Resistant, Water Cleanable Tile Setting and Grouting Epoxy.
- Q. ANSI A118.4 Specifications for Latex-Portland Cement Mortar.
- R. ANSI A118.6 Specifications for Ceramic Tile Grouts.
- S. ANSI A118.7 Specifications for Polymer Modified Ceramic Tile Grouts.
- T. ANSI A118.9 Specifications for Test Methods and Specifications for Cementitious Backer Units.
- U. ANSI A118.10 Specifications for Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone Installations.
- V. ANSI A118.12 Specifications for Crack Isolation Membranes for Thin-Set Ceramic Tile and Dimension Stone Installations.
- W. ANSI A118.13 Specification for Bonded Sound Reduction Membranes for Thin-Set Ceramic Tile Installation.
- X. TCNA 2012 "Handbook for Ceramic Tile Installation"; Tile Council of America Method # _____.
- Y. U.S. Product Standard PS-I for Construction and Industrial Plywood.

1.4 SUBMITTALS

- A. General: Submit samples and manufacturer's product data sheets, installation instructions, etc. in accordance with Division 01 General Requirements Submittal Section.
- B. Test Data: Submit qualified testing data that confirms compliance with specified performance requirements.

QUALITY ASSURANCE

- C. Qualifications:
 - 1. Manufacturer:
 - a. Must have marketed very early high strength, low shrinkage, hydraulic cement materials in the United States for at least five years and must have completed projects of the same general scope and complexity.
 - b. Complementary admixture materials must be manufactured by or approved for use by CTS Cement Manufacturing Corp. (800-929-3030, www.CTScement.com) and distributed by the same or an authorized CTS Cement dealer.
 - 2. Applicator:
 - a. Must be an experienced installer who has completed tile installations similar in material, design as indicated for this project and has a record of successful projects.
 - 3. Mockups:
 - a. Build mockups to verify material selection made under submittals and demonstrate aesthetic effects and set quality standards for materials and execution.



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1.5 DELIVERY, STORAGE, AND HANDLING

- A. Delivery: Deliver products in original, unopened, undamaged packaging with manufacturer's identification (i.e., brand logo, product name, weight of packaged unit, lot number).
- B. Storage: Store products in a dry location, covered, out of direct sunlight, off the ground, and protected from moisture. Maintain storage temperature required by the manufacturer. Keep materials dry until used. Store bulk sand in a well-drained area on a clean, solid surface. Take necessary precautions to prevent contamination of materials.
- C. Handling: Handle products in accordance with manufacturer's published recommendations.

1.6 SITE / ENVIRONMENTAL CONDITIONS

- A. Temperature: Maintain ambient and surface temperatures between 50°F (10°C) to 90°F (32°C) during installation of tile setting mortar and 72 hours thereafter. Do not apply cementitious materials if substrate is frozen (32°F/0°C).
- B. Inclement Weather: Do not apply materials in exterior during inclement weather unless appropriate protection is employed.
- C. Substrate: Prior to installation, substrates must be inspected for surface contamination or other conditions that may adversely affect the performance of the cementitious adhesive.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. CTS Cement Manufacturing Corp., 12442 Knott Street, Garden Grove, CA 92841 (800-929-3030), www.CTScement.com).
- B. Components: Obtain cement and other complementary admixture and materials manufactured by CTS Cement from authorized distributors. No substitutions or additions of other materials are permitted without prior written permission from the manufacturer for this project.

2.2 SETTING MATERIALS

- A. Polymer Modified, Dry-set Cement Mortar, Non-Sag, for Large and Heavy Tile: ANSI A118.4, ANSI 118.11, ANSI 118.15 (Tested at 60°C).
 - 1. Rapid Set® All Tile Mortar: is a polymer modified, calcium sulfoaluminate hydraulic cement-based product used to waterproof surfaces. It offers high bond strength, and abrasion resistance to achieve the highest durability and long-term performance.
 - 2. Additives and admixture materials must be approved for use by CTS Cement Manufacturing Corp. prior to use. (800-929-3030, www.CTScement.com)
- B. Water: Clean, potable water free of deleterious amounts of silt and dissolved salts conforming to ASTM C1602.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify substrates for compliance with requirements outlined in ANSI A108.01, ANSI 108.02.
- B. Compliance: Comply with conditions outlined in reference tile installation standard and manufacturer's printed instructions.
- C. Coordinate installation with adjacent work to ensure proper sequencing of construction.



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3.2 PREPARATION

- A. Follow guidelines provided in ANSI A108.01, ANSI 108.02 for substrate surface preparation.
- B. Remove all loose, unsound, contaminated material to create a clean, sound surface free from any materials that may inhibit such as oil, dirt, paint, asphalt, sealing and curing compounds, acids, wax and loose dust and debris.
- C. Repair holes, and cracks found on substrate prior to installation.
- D. Minimum substrate temperature must be 50°F (7°C) and maximum substrate temperature 90°F (32°C).

3.3 MIXING

- A. Follow manufacturer's printed mixing instructions. Water amount will depend on consistency of mix, and application method.
- B. Admixtures must be approved for use in writing by an authorized CTS Cement Manufacturing Technical Representative prior to use.

3.4 APPLICATION

- A. Comply with manufacturer's printed instructions and the following:
 - 1. Verify that all substrates and ambient temperatures are between 50°F (7°C) to 90°F (32°C) and will remain within range for 72 hrs.
 - 2. Install tile following manufacturer's printed instructions and applicable requirements of ANSI A108 Series for materials used.
 - 3. Install tile in accordance with TCNA methods specified.

CURING

- A. Floors: Allow polymer modified cement mortar used to set tile to cure for 72 hours after installation.
 - 1. Do not step on floor for at least 24 hours if applied during low ambient temperatures, use plywood stepping boards if traffic is necessary.
 - 2. Protect from heavy traffic for at least 72 hours after installation.
- B. Walls: Protect wall installations from impact, vibration, and hammering on adjacent and opposite walls for 72 hours after installation.
- C. Protect from freezing and total water immersion for at least 7 days after installation.

3.5 CLEAN-UP

- A. Clean excess material from surrounding areas and all tools immediately, before material reaches final set. If material has cured, remove using mechanical methods that will not damage the application or substrate.
- B. Clean adjacent surfaces as needed using appropriate materials and methods to prevent damage to materials being cleaned. Remove and replace work that cannot be cleaned to the satisfaction of the Engineer or Owner.

END OF SECTION

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