SECTION 09305.21

HIGH PERFORMANCE LATEX-MODIFIED THIN-SET MORTAR

This product guide specification can be used to specify Hydroment ReFlex, a high performance, latex-modified, thin-set mortar for all types of tile. It can be used for interior, exterior, vertical, and horizontal applications. Hydroment ReFlex is extremely tacky and flexible and can be applied to various types of substrates including deflecting ones. This specification guide can be inserted into SECTION 09300 - TILE. The various paragraphs will need to be inserted in the appropriate locations in either Part 1, 2, or 3 of that section. This guide can also be combined with other guides to develop SECTION 09305 - TILE SETTING MATERIALS AND ACCESSORIES. ****

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes: Trowel applied, high performance, latex-modified, thin-set mortar for setting [ceramic] [quarry] [porcelain] [pavers] [mosaic] [glass] [salttilo] [granite] [slate] [marble] [limestone] [_____] tile.

1.2 REFERENCES

A. ANSI A108.5 - Ceramic Tile Installed with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar.

B. ANSI A118.4 - Latex-Portland Cement Mortar.

C. ANSI A118.11 - Exterior Grade Plywood, Latex Portland Cement Mortar.

3 SUBMITTALS

A. Provide in accordance with Section 01330 - Submittal Procedures: Product data and installation instructions.

B. Sustainable Design Submittals:

PARTS 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS


B. Manufacturers of equivalent products submitted and approved in accordance with Section 01630 - Product Substitution Procedures.
2.2 PRODUCTS

A. High performance, latex-modified, thin-set mortar:

1. Type: High performance, trowel applied, latex-modified, thin-set mortar exceeding requirements of ANSI A118.4 and ANSI A118.11; Hydroment ReFlex as manufactured by Bostik, Inc.

2. Characteristics:
   a. Extremely tacky consistency suitable for a variety of tiles with different absorption rates difficult bonding substrates.

***** **Hydroment ReFlex can withstand substrate deflections of L/240 except for setting natural stone tile where deflections may be limited to L/720. Contact Bostik, Inc. for stone tile setting recommendations.  *****

b. Substrate deflection capabilities:
   1) Natural stone tile: L/720 maximum.
   2) Other tile: L/240 maximum.

3. Physical properties:
   a. Open time at 70 degrees F: 70 minutes minimum.
   b. Adjustability time: 40 minutes.
   c. Pot life at 70 degrees F: 1 to 2 hours.
   d. Initial set at 70 degrees F: 2 to 4 hours.
   e. Final set at 70 degrees F: 10 to 15 hours.
   f. 7 days shear strength:
      1) Ceramic mosaic tile: 576 PSI.
      2) Glazed wall tile: 403 PSI.
      3) Quarry tile to wood: Exceed 300 PSI wood failure.
   g. 28 days shear strength:
      1) Ceramic mosaic tile: 623 PSI.
2) Glazed wall tile: 557 PSI.

3) Quarry tile to wood: Exceed 300 PSI wood failure.


PART 3 - EXECUTION

3.1 APPLICATION

***** Hydroment ReFlex can be applied to concrete, exterior grade plywood, cementitious backer board, approved waterproofing and crack isolation membranes, cork underlayment and existing resilient flooring and ceramic tile. It should not be applied in areas subject to hydrostatic pressure or over oriented strand board, particle board, luaun, and masonite. Hydroment ReFlex is not suitable where substrate deflection exceeds L/240 and for installing moisture sensitive stone tile such as green marble. Refer to Bostik product literature for other limitations and suitable substrates. *****

A. Prepare substrate and apply mortar in accordance with manufacturer's installation instructions and ANSI A108.5.

B. Preparation: Ensure substrates are structurally sound, clean, and free of dust, dirt, oil, grease, curing compounds and other contaminants which inhibit bond.

1. Concrete: Verify concrete has completely cured 30 days minimum.

***** Plywood should not be used as substrate for Hydroment ReFlex mortar in exterior or wet interior applications. *****

2. [Existing] Wood subfloor:

   a. Verify subfloor is elevated with adequate ventilation space below framing.

   b. Verify framing is adequately braced without deflection and floor sheathing is properly secured with edges over firm bearing. Maximum spacing of joists shall be [16 inches] [406 mm]. Sheathing shall be exterior grade plywood.

   c. Verify that [1/8 inch] [3 mm] gap existing between sheathing at vertical surfaces and penetrations. Fill gaps with mortar when tile is installed.

   d. For installation over existing wood flooring: If existing sheathing is less than [1 inch thick] [25 mm], glue and nail [1/2 inch] [13 mm] exterior grade plywood to surface with fasteners of type, size, and spacing as recommended by manufacturer. Ensure that underlayment panels do not contain materials or coatings that will adversely affect bond of thin-set
BOSTIK PRODUCT SPECIFICATIONS

Bostik, Inc., 211 Bost

on

Street, Middleton, Massachusetts 01949

TEL: 888-592-8558; FAX: 978-750-7212; WEBSITE: www.bostik-us.com

HIGH PERFORMANCE LATEX-MODIFIED THIN-SET MORTAR

mortar.

e. Clean and rough sand plywood surface.

3. Existing resilient flooring and cutback adhesive residue: Ensure flooring is clean and well-bonded to substrate. Do not install over cushion-backed vinyl flooring. Remove loose pieces and cutback adhesive residue. Verify cutback adhesive residue is dry and well bonded.

4. Existing ceramic tile: Ensure existing tile is clean and well-bonded to substrate. Mechanically abrades surface with carborundum disk. Wash with clean water. Rinse thoroughly and allow to dry.

C. Mixing: Mix 5 to 6 quarts of potable water to 50 pounds mortar with slow speed mixer at 150 RPM maximum. Allow mixture to stand 15 minutes and re-mix. Do not re-temper by adding more liquid.

D. Application:

1. Apply mortar to area no greater than can be tiled in 30 minutes.

2. Apply thin coat of mortar with flat edge of trowel to achieve mechanical bond to substrate. Comb additional mortar with notched trowel of size recommended by manufacturer.

3. Apply tile with twisting motion to ensure maximum contact.

E. Field quality control: Periodically check back of tile for proper transfer and thickness:

1. Interior applications: 80 percent minimum coverage.

2. Exterior, wet, and plywood applications: 95 percent minimum coverage.

3. Finished mortar bed thickness: [3/32 to 1/8 inch] [2 to 3 mm].

F. Curing: Keep all traffic off installation for 12 hours or until tile is firmly set.

END OF SECTION