

MANUFACTURER'S SPECIFICATIONS
Section 09225 – ST. ASTIER LIME PLASTER (NHL)
PLASTER ON WOODEN LATH

ST. ASTIER NATURAL HYDRAULIC LIME PLASTER

PART 1 – GENERAL

1.1 Summary

- A. This Section includes St. Astier Natural Hydraulic Lime plaster system.
- B. Related Sections
 - 1. Section [_____ – _____]: Wall substrate surface.

1.2 References

- A. American Society for Testing and Materials
 - 1. ASTM C25 – Test Methods for Chemical Analysis of Limestone, Quicklime and Hydrated Lime.
 - 2. ASTM C91 – Standard Specification for Masonry Cement.
 - 3. ASTM C109 – Test Method for Compressive Strength of Hydraulic Cement Mortars.
 - 4. ASTM C141 / C141M – Standard Specification for Hydrated Hydraulic Lime for Structural Purposes.
 - 5. ASTM C144 – Standard Specification - Aggregate for Masonry Mortar.
 - 6. ASTM C926 – Standard Specification for Application of Portland Cement-Based Plaster.
 - 7. ASTM C979 – Standard Specification for Pigments for Integrally Colored Concrete.
- B. Portland Cement Association
 - 1. PCA – Portland Cement Plaster (Stucco) Manual.
- C. European Standard
 - 1. EN 459-1 Building Lime – Part 1: Definitions, Specifications and Conformity Criteria
 - 2. EN 459-2 Building Lime – Part 2: Test Methods

3. EN 459-3 Building Lime – Part 3: Conformity Evaluation

1.3 Performance Requirements

- A. Structure to be designed in such a way as to minimize the transfer of stress from building to plaster skin.

1.4 Submittals

- A. Section 01330 – Submittal Procedures: Submittal Procedures.
- B. Product Data: Submit data on plaster materials, characteristics and limitations of products specified with reference to successful installations in North America for a minimum of ten (10) years.
- C. Samples: Submit two samples, 12 inch by 12 inch in size, illustrating finish color and texture.

1.5 Quality Assurance

- A. Perform Work in accordance with Manufacturer's Instructions.

1.6 Qualifications

- A. Manufacturer: All St. Astier NHL shall be obtained from:
TransMineral USA, Inc.
201 Purrington Road
Petaluma, CA 94952
707-769-0661
707-769-0352 Fax
transmin@sonic.net
www.limes.us
www.transmineralusa.com

or its authorized distributors.
- B. Installer: Company specializing in performing plaster/stucco work with a minimum of three (5) years experience with similar products.

1.7 Mock-up

- A. Section 01400 – Quality Requirements: Requirements for mock-up.

- B. Construct mock-up, ___ feet long by ___ inch wide, including exterior and interior wall and ceiling system illustrating surface finish and color.
- C. Locate where directed by Architect.
- D. [Incorporate accepted mock-up as part of Work.]

1.8 Pre-Installation Meetings

- A. Section 1300 – Administrative Requirements: Pre-Installation Meeting.
- B. Convene minimum one week prior to commencing work of this SECTION.

1.9 Environmental Requirements

- A. Provide environmental conditions at areas where Work of this SECTION is being performed to allow limeplaster to properly cure.
- B. Take precautionary measures necessary to assure that excessive temperature changes do not occur.
- C. Do not apply limeplaster unless minimum ambient temperature of 45 degrees F and a maximum of 85 degrees F has been and continues to be maintained for a minimum of 48 hours prior to application and until plaster is cured.
- D. Hot Weather Requirements: Protect limeplaster from uneven and excessive evaporation during dry, hot weather. Provide tarping over the outside of all scaffolding.

PART 2 – PRODUCTS

2.1 Lime Plaster (NHL)

- A. Manufacturer
 - 1. CESA – Imported and distributed by TransMineral USA, Inc.
 - 2. Substitutions not permitted.

2.2 Components

- A. Performance requirements. Pozzolanic or other additions (including additions such as titanium dioxide or limestone filler) not permitted.

09225-3

St. Astier Natural
Hydraulic Lime Plaster (NHL)
Plaster on Wooden Lath 07/08/13

Manufacturer to disclose all components as per REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) and HPD (Health Product Declaration).

- [1. NHL 2: Product must fulfill all requirements of EN-459 and ASTM C-141 and have:
 - a. Available lime: 50 to 60%.
 - b. Damaging components: chemical and mineralogical analysis.
 - $\text{SO}_3 < 0.50\%$.
 - Compatibility with backgrounds containing sulfate or gypsum.
 - Alkalis content to be compatible with old masonry. Total alkalis $< 0.5\%$
 - c. Expansion: $< 1\text{mm}$ (C-141 autoclave expansion test method 11.5).
 - d. Whiteness index: $Y 76 \pm 1$
 - e. Compressive strength (per EN-459): $4.5 \text{ MPa} \pm 0.5$.
 - f. Compressive strength at full carbonation. Provide testing data (2 years) for required mixing ratios.
 - g. The product shall be reworkable at 24 hours as tested in accordance with C-141 11.7.]
- [2. NHL 3.5: Product must fulfill all requirements of EN-459 and ASTM C-141 and have:
 - a. Available lime: 20 to 25%.
 - b. Damaging components: chemical and mineralogical analysis.
 - $\text{SO}_3 < 0.50\%$.
 - Compatibility with backgrounds containing sulfate or gypsum.
 - Alkalis content to be compatible with old masonry. Total alkalis $< 0.5\%$
 - c. Expansion: $< 1\text{mm}$ (C-141 autoclave expansion test method 11.5).
 - d. whiteness index: $Y 72 \pm 1$
 - e. Compressive strength (per EN-459): $7 \text{ Mpa} \pm 0.75$
 - f. Compressive strength at full carbonation. Provide testing data (2 years) for required mixing ratios.
 - g. The product shall be reworkable at 24 hours as tested in accordance with C-141 11.7.]
- [3. NHL 5: Product must fulfill all requirements of EN-459 and ASTM C-141 and have:
 - a. Available lime: 15 to 20%.

- b. Damaging components: chemical and mineralogical analysis.
 - SO₃ < 0.50%.
 - Compatibility with backgrounds containing sulfate or gypsum.
 - Alkalis content to be compatible with old masonry. Total alkalis < 0.5%
- b. Expansion: < 1mm (C-141 autoclave expansion test method 11.5).
- c. Whiteness index: Y 67 ± 1
- d. Compressive strength (per EN-459): 8.5 Mpa ± 0.75
- e. Compressive strength at full carbonation. Provide testing data (2 years) for required mixing ratios.
- g. The product shall be reworkable at 24 hours as tested in accordance with C-141 11.7.]

B. Plaster Base Materials

- 1. Binder: St. Astier Natural Hydraulic Lime [NHL 2] [NHL 3.5]
- 2. [Pre-Mix: EcoMortar G-B]
- 3. Aggregate: Natural or Manufactured Sharp Sand with at least 4 grades forming a substantial part of the sand and no more than 3% of particles smaller than grade #200 (0.075mm).
- 4. [Fibers: ½ inch nominal length glass fibers meeting requirements of ASTM C1116.] [Fibers: animal hair]

C. Plaster Finish Materials

- 1. Binder: St. Astier Natural Hydraulic Lime NHL 2.
- 2. [Pre-Mix: EcoMortar F-2]
- 3. [Color Pigment: ASTM C979 mineral oxide type, []color.]
- 4. Water: Clean, fresh, potable and free of mineral or organic matter capable of affecting plaster.

D. Finish Aggregate.

5. Aggregate: Natural or Manufactured Sharp Sand with at least 4 grades forming a substantial part of the sand and no more than 3% of particles smaller than grade #200 (0.075mm).

2.3 Mixes

- A. Scratch Coat: [1 part NHL 2 and [2] [2.5] parts of sand, proportioned by volume.] [Pre-Mix EcoMortar G-B]

[1. Fiber Reinforcement: add [fiber] [hair] to scratch coat]

- B. Brown Coats: 1 part NHL 2 and [2.5] [3] parts of sand, proportioned by volume.

[1. Fiber Reinforcement: add [fiber] [hair] to scratch coat.]

- C. Finish Coat: [1 part NHL 2 and [2.5] [3] parts of sand, proportioned by volume.] [Ready-Mix: Ecomortar F-2]

- D. Mix only as much plaster as can be used prior to initial set.

- E. [Add color pigments to finish coat.]

- F. Mix materials dry, to uniform color and consistency, before adding water.

- G. Protect mixtures from freezing, frost, contamination, and excessive evaporation.

PART 3 – EXECUTION

3.1 Examination

- A. Section 01300 – Administrative Requirements: Coordination and project conditions.
- B. Surface to be sound enough to receive plaster coat.
- C. Mechanical and Electrical: Verify surfaces within walls have been tested and approved.

3.2 Preparation

- A. Mist surfaces to reduce excessive suction.

- B. Prior to the scratch coat being applied, any excessive depression or hollow requiring dubbing out should be carried out using 1 to 1.5 minimum (NHL 2 to sand) mixed with [fiber] [hair].

3.3 Installation

A. [Installation of Accessories:]

1. [Install accessories in accordance with ASTM C1063.]
2. [Place corner bead at external wall corners.]
3. [Place casing beads at terminations of plaster finish. Butt and align ends. Secure rigidly in place.]
4. [Install door and glazed frames plumb and level in opening. Secure rigidly in place.]

B. [Control and Expansion Joints:]

1. [Install interior control and expansion joints.]
2. [Install exterior contraction joints after initial set, scribed as indicated on Drawings by cutting through 2/3 of lime plaster depth, neatly, in straight lines.]
3. [For horizontal exterior surfaces, install control and expansion joints as indicated on Drawings.]
4. [For vertical exterior surfaces, install control and expansion joints as indicated on Drawings.]

C. Plastering

1. Apply plaster in accordance with manufacturer's instructions.
2. Apply scratch coat to a nominal thickness of 3/8 inch, and brown coat to nominal thickness of 3/8 inch.
3. Apply finish coat to a nominal thickness of [1/8] [3/16] inch.
4. After curing, dampen previous coat prior to applying finish coat. ALLOW 7 to 10 DAYS BETWEEN COATS.
5. Apply finish coat [to indicated color and texture.] [to [light dash] [medium dash] [heavy dash] [fine sand float] [medium sand float] [heavy sand float] [combed] [glacier] [aggregate surfaced] [_____] texture with selected color..
6. Avoid excessive working of the surface. Delay troweling as long as possible to avoid drawing excess fines to surface.

3.4 Erection Tolerances

A. Section 01400 – Quality Requirements: Tolerances.

09225-7

St. Astier Natural
Hydraulic Lime Plaster (NHL)
Plaster on Wooden Lath 07/08/13

3.5 Adjusting

- A. Section 01700 – Execution Requirements: Testing, adjusting, and balancing.
- B. Remove damaged or defective plaster by cutting and replace with specified materials to match adjacent plaster.

3.6 Schedules

END OF SECTION