

Stucco 14S

Natural Cement-Based Plaster for Repair or Replacement of Historic Stucco

DESCRIPTION

ROSENDALE 14S are custom-matched, pre-packaged natural cement-based plasters for repair or replacement of historic renders and stuccos. It is prepared in conformance with traditional recipes for natural cement renders, which were widely used in the 19th and early 20th Centuries in North America. Stuccos based on natural cement have endured for more than 150 years, even under severe coastal service exposures, and feature high vapor permeability and low modulus of elasticity.

Rosendale Natural Cement Products[®] are produced from argillaceous limestones conforming to the requirements of *ASTM C10 Standard Specification for Natural Cement*.

FEATURES

ROSENDALE 14S offers long-term performance features which are unique to natural cement products, including:

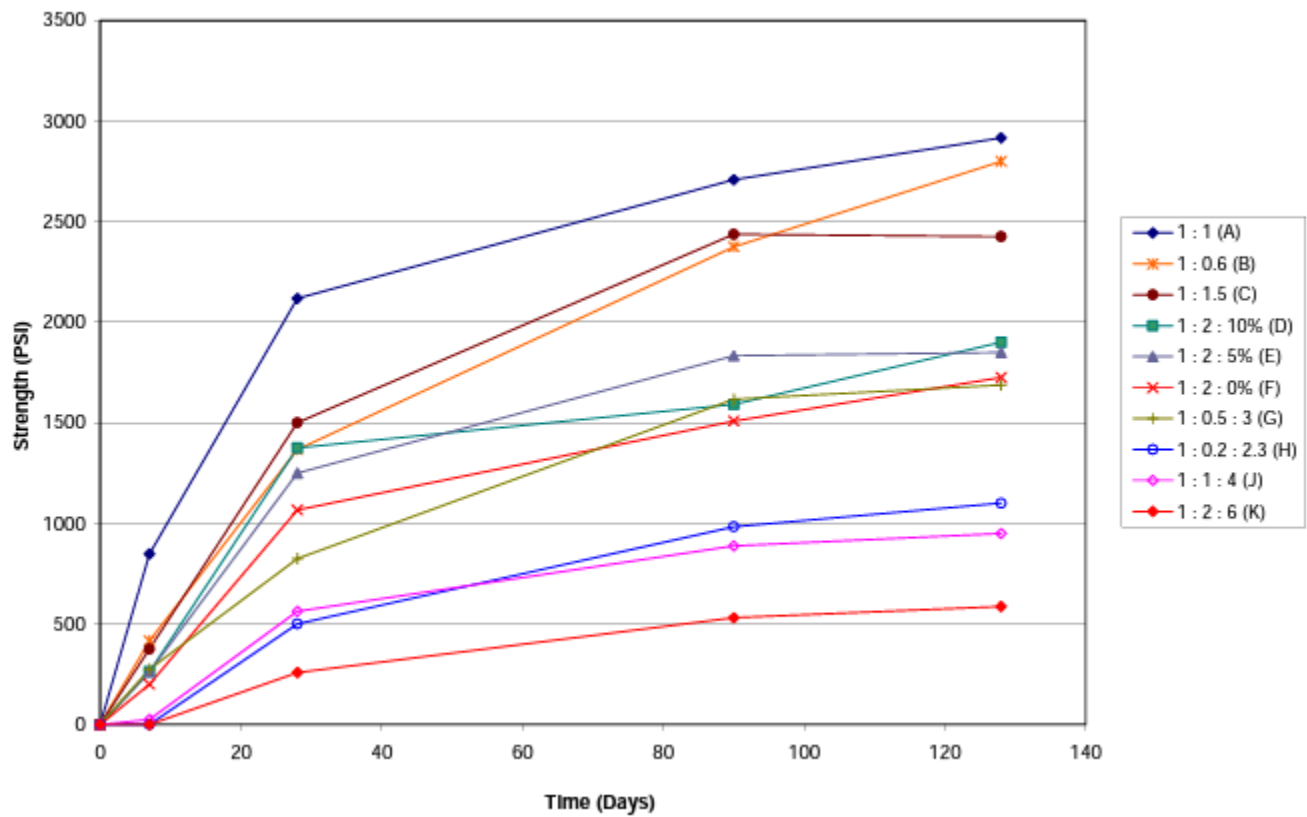
- **Fast Initial Set:** Typical initial set time is 20-60 minutes, and typical final set time is 40-120 minutes. Time of setting can be prolonged by post addition of **SYSTEM 22** set retarding admixture or by use of mixtures containing higher proportions of hydrated lime. Set retarders can also be added at the factory. Product packaging discloses any such functional additions.
- **Moderate Strength:** Compressive strength is typically on the order of 1000 psi. Unlike lime products which tend to set only at the surface and then require very long periods of time for deeper reaction with atmospheric carbon dioxide, natural cement is a true hydraulic cement, achieving full-depth set within minutes and full cure within a few months. Strengths can be adjusted by selection of varied proportions of components.
- **Water Resistance:** Natural cement plasters withstand severe wind-driven rain exposures within a short time of application, facilitating the installation process. They can also be formulated for water immersion and below-grade foundation coatings.

- **Early Freeze Resistance:** Natural cement that will not be subjected to saturated conditions requires only a relatively short period of protection from freezing. This facilitates installation over the course of a much-extended working season in northern climates, as compared with lime and hydraulic lime products. For stuccos that will be frozen while saturated, Consult Edison Coatings for guidance.
- **Low Modulus:** Unlike Portland cement plasters which tend to embrittle with time, natural cements continue to relieve stress and remain mechanically compatible with masonry substrates, even after more than a century of performance.
- **High Permeability:** Natural cements permit higher rates of moisture vapor transmission than Portland cement-based plasters, assuring that buildings and structures will “breathe”, avoiding moisture entrapment.

PERFORMANCE

Individual custom formulations will vary in their properties. Consult Edison Coatings for guidance on formulating compatible stuccos for your application. Typically, ASTM C926 is used to determine the number and thickness of coats required, based on substrate type and conditions. Base coats can be modified with natural or synthetic fiber to increase crack resistance. **ROSENDALE 14S** can be modified with **ICE-MINUS 9 (RL-9)** polymer to increase freeze thaw resistance, flexibility, bond strength, and reduce water absorption rate. The following is a guide to anticipated strength development based on stucco proportions:

COMPRESSIVE STRENGTH



APPLICATION

ROSENDALE 14S natural cement plasters are applied in accordance with traditional masonry practices. Most general installation guidelines are typical of all renders and plasters.

Substrates must be sound, clean, roughened and properly prepared. For stucco applications over brickwork, the masonry mortar joints should be ground out to a depth of ½” minimum. The stucco is then applied in two to three applications, with the first just filling the joints and spread to provide a thin “bond coat” on the masonry surfaces. A second, heavier application is then applied and finished immediately. A third application may be required depending on the substrate. Thorough pre-wetting is required to assure that the stucco will not dry too quickly. Subsequent coats can be applied as soon as previous coats have set through and are strong enough to accept additional coats without damage.

ROSENDALE 14S must be mixed with clean water or **ICE-MINUS 9 (RL-9)** in accordance with printed mixing instructions, and liquid addition levels must be controlled to obtain optimum color uniformity and best performance. Liquid addition levels are determined by mockups, as addition level may vary according to mix design.

MIXING RATIO: 0.75 to 1.25 gallons of Liquid per 50 lb bag of ROSENDALE 14S Stucco

Mixed stucco must be used before initial set, so mix only as much material as will be used within 10 minutes for quick-setting stucco, or within 30 minutes for regular setting stucco. Once material has begun to set, it should not be re-tempered or adjusted with additional liquid, but should be discarded.

Once the material has been finished, it must be maintained in a damp condition throughout its curing period. Generally, this period of wet curing will be a minimum of 3 days, depending on conditions. Consult your Edison Coatings technical representative for curing guidelines for your specific project conditions. Acceptable curing methods include draping burlap over the fresh stucco and maintaining the burlap in a damp condition, or frequent misting with water, or covering with polyethylene.



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