

ROSENDALE



NATURAL CEMENT PRODUCTS®

STUCCO 14 S

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

DESCRIPTION

ROSENDALE 14-S is a series of 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.

FEATURES

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

- **Fast Set:** Typical initial set time is 20-60 minutes, varying based on formulation details. Set time is influenced by temperature, water addition levels, use of Quick-Setting Natural Cement vs. Natural Cement and mix design proportions. Working time can be extended by incorporation of set retarders, either at the factory, or on site by addition of **System 22** Set Retarder in accordance with instructions..
- **Moderate Strength:** Compressive strength is controlled by proper proportioning of cement, aggregates and lime (if any). Depending on the specific proportions of each formulation and aggregate grading, compressive strengths at 90 days may be adjusted from 500 to 3500 psi. Unlike lime products, which set only at the surface and then require long periods of time for deeper reaction with atmospheric carbon dioxide, natural cement is a true hydraulic cement, achieving full-depth set within minutes or hours.
- **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. Longer cure times are required before exposure to freezing for mortars that will be frozen while saturated. Consult Edison Coatings for guidance under these conditions.

- **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.

FORMULATION:

- **Rosendale Natural Cement Products®** are made from authentic natural cement, produced from argillaceous limestone extracted from quarries and mines used during the 19th Century to produce historic natural cement materials.
- **Lime** incorporated in **Rosendale 14S** stuccos can be customized to meet individual project requirements, though historic materials were sometimes based on natural cement without lime. Hydrated dolomitic building lime meeting the specifications of ASTM C207 Type S or SA, or high calcium limes meeting the requirements of ASTM C207 Type N may be incorporated. Lime can also be omitted in order to allow on-site addition of lime paste (putty) or field-hydrated quicklime.
- **Sand** incorporated in **Rosendale 14S** is also customized to meet individual project requirements. Sands are routinely customized to match original sands as closely as possible in color, size and composition. Unless otherwise specified, sand blends are formulated to meet the requirements of ASTM C897.

APPLICATION

ROSENDALE 14 S natural cement plasters are applied in accordance with traditional masonry practices. These practices are taught to masons and restoration contractors in the course of hands-on training workshops, which are offered on a regular basis. On-site training services are also available. Applicators meeting the performance requirements of the training workshop are individually certified. Edison Coatings also makes alternate provisions for acceptance of experienced masons who have demonstrated their knowledge and abilities in traditional masonry practices.

Generally, workability of natural cement mortars, stuccos, grouts and concretes is excellent, and many tradesmen have expressed preference for working with natural cement over portland cement-lime combinations. Proportioning guidelines are different from modern cement materials, however, and misproportioning will diminish performance. Consult Edison Coatings, Inc. for guidance on proper proportioning of natural cement mixtures.

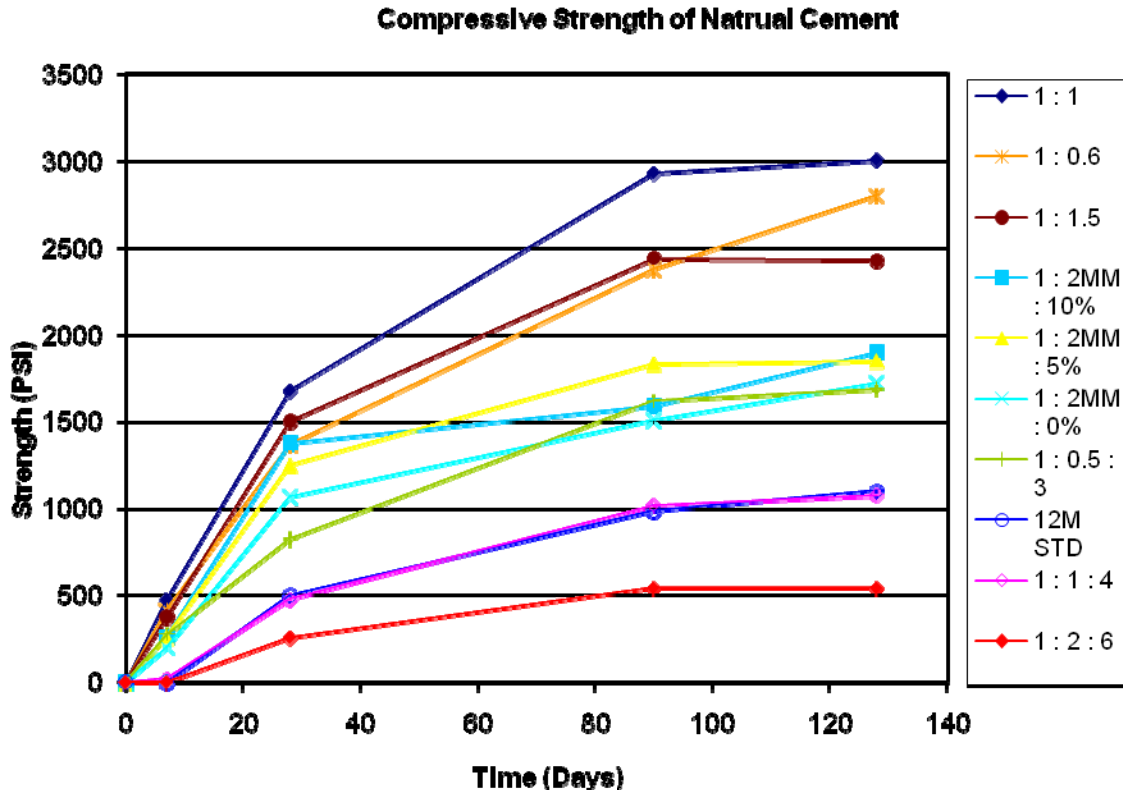
Substrates must be sound, clean, roughened and properly prepared. For stucco applications over brickwork, the masonry mortar joints should be ground out to a depth of ½” minimum. The stucco is then applied in two applications, with the first just filling the joints and spread to provide a thin “bond coat” on the masonry surfaces. A second, heavier application is then applied and finished immediately. Thorough pre-wetting is required to assure that the stucco will not dry too quickly. **ROSENDALE 14 S** must be mixed with clean water in accordance with printed mixing instructions, and water addition levels must be controlled in order to obtain optimum color uniformity and best performance.

Mixed stucco must be used before initial set, so mix only as much material as will be used within 10-30 minutes, depending on your particular formulation and working conditions. Once material has begun to set, it should not be re-tempered or adjusted with additional water, 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. For formulations with little or no lime content, covering with polyethylene is also acceptable.

PERFORMANCE

Individual custom formulations will vary in their properties. Consult Edison Coatings for guidance on formulating compatible stuccos for your application.



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