Edison Coatings, Inc.

# CEM-PLAST 54

### Custom Specification-Grade Cement Plasters

#### **DESCRIPTION:**

*CEM-PLAST 54* is a series of pre-colored, prepackaged cement plasters for use in new construction and restoration. They are formulated in accordance with ASTM C 926 specifications to provide consistent, reliable results in both performance and appearance.

**CEM-PLAST 54** is a complete system, including surface bond-dash coat, base coat and finish coat materials. Components are mixed with water or **Restoration Latex RL-9** as directed and are applied using the Standard Procedures for cement plaster application.

#### **SELECTION:**

ASTM C 926 provides selection guides and mix proportioning for various base coat and finish coat plasters. These may be based on lime with Portland cement, masonry cement or plastic cement with suitable aggregates. A variety of admixtures, textures and other options are also permitted. As a custom manufactured system, *CEM-PLAST 54* and its components can be formulated and manufactured to meet the specific requirements of any particular design specification within the ASTM C 926 guidelines.

For general purpose repair and plastering work, Edison Coatings also offers several basic "standard" mixes and recommendations:

#### CEM-PLAST 54 BASE M

This non-pigmented plaster base mix is intended for application over porous substrates such as common brick and concrete block. It is mixed with water for general purpose plaster work or may be mixed *Restoration Latex RL-9* for improved bond, reduced shrinkage and lower Modulus of Elasticity. Latexmodified plasters also eliminate wet-curing



Photo: Central Presbyterian Church, Park Ave, NYC. Cem-Plast 54 Base F/R, Custom 45 Type ST, and Spec-Joint 46 Type N were used to replicate the aesthetic of natural granite stone construction using this highperformance plaster system.

requirements under most conditions and may be applied in greater depths without risk of cracking.

#### CEM-PLAST 54 BASE CM

This non-pigmented plaster base mix is intended for application over low porosity substrates such as dense, smooth brick and clay tile. It is mixed with water for general purpose plaster work or may be mixed with *Restoration Latex RL-9* for improved bond, reduced shrinkage and lower Modulus of Elasticity.

#### CEM-PLAST 54 BASE F/R

This synthetic fiber modified base coat can be produced in any of the mix designs outlined in ASTM C 926, with added fiber. It is intended for applications where multiple different substrate types are present, with varying thermal expansion characteristics. Fiber reinforcement provides added long term durability and resistance to cracking from stresses.

#### **CEM-PLAST 54 FINISH FM**

This general purpose finish is available in a wide range of custom colors and textures, and may also incorporate custom aggregates for size and color distinction. It is generally mixed with water for closest match to historic plasters, but may also be formulated for use with *Restoration Latex RL-9* latex upon request. A standard fine grey formula is also offered if the material is to be coated. Suitable coatings include *ELASTOWALL 351*, *AQRYL-X 200, EVERKOTE 300*, and/or *AQUATHANE UA210*.

#### **RL-2 BASED BOND COAT**

While special purpose bond coats are available, a simple and effective method of bond coating is to mix *CEM-PLAST 54 BASE M* or *CM* with *Restoration Latex RL-2*. This produces a slurry consistency which can then be sprayed or brushed and worked into the surface to provide superior bonding.

#### **REPAIRS/CUSTOM FINISHES:** CUSTOM 45

For limited repairs, such as to cracks or localized damages (patching) in existing plasters, *Custom SYSTEM 45 Type ST* Stucco formula provides a viable alternative, which may be applied in a single application.

*Custom SYSTEM 45 Type ST* can be used as the finish coat to produce custom finishes, that replicate natural stone or other types of masonry.



Photo: Before restoration conditions at Central Presbyterian Church. Multiple phases of previous repairs, damaged stone, and other masonry were removed to sound substrate prior to plastering.



*Photo:* Cem-Plast 54 Base F/R is applied as the first coat and left rough to promote high bond strength of the subsequent Custom 45 Type ST finish coat.



Photo: Custom 45 Type ST was applied as the finish coat to replicate the aesthetic of natural granite block. The joint pattern was cut out by diamond saw and then repointed with Spec-Joint 46 Type N.

#### **APPLICATION:**

1. Observe all standard practices for cement plaster application and restoration.

2. **Surface Preparation:** Stone, masonry or concrete substrates must be clean and free of oils, dirt, coatings, unsound plaster or foreign materials which may inhibit bonding. Smooth, dense or non-absorbent surfaces may require abrasive blasting or acid etching prior to plaster application.

3. **Priming:** Dampen all porous surfaces with clean potable water prior to application, but leave no standing excess water. Do not dampen smooth, non-porous surfaces such as dense concrete or smooth brick. Prepare a bonding coat (slurry coat) consisting of *CEM-PLAST 54 BASE* and *Restoration Latex RL-*2 or *RL-9*, mixed to the consistency of a heavy paint

(approximate mix proportions are 1 part liquid to 3 parts BASE). Spray or brush the bond coat onto the substrate and work into all depressions, pores, corners and sidewalls using a stiff brush. Keep this application thin. Apply only to as much area as will be base coated within 1 hour.

4. **Mixing:** All plaster mixes must be prepared in a mechanical mixer, such as a mortar mixer or in a mixing container with a slow speed drill mixer (250 - 450 rpm). Hand mixing is unacceptable. Mix for a minimum of 4 minutes, and until all material is uniform in appearance and working consistency. Base Coat mixes made with water which have stiffened because of evaporation of water may be re-tempered once only to restore the required consistency, but must be discarded after 1½ hours under normal weather conditions. Finish Coat mixes and latex-modified base mixes must not be retempered.

5. Base Coat Application: Apply base coat by hand or machine to the design thickness. Separation must be provided where plaster abuts dissimilar construction materials, openings, or previous control joints. Apply each coat to an entire wall without interruption to avoid cold joints and abrupt changes in the uniformity of appearance. When applying plaster in sections, always work to an inconspicuous "break", such as a corner, opening, control joint or belt course. Base coats should be applied in such a manner as required to provide a straight and level surface, filling in any unevenness in the substrate. As soon as the base coat material becomes firm, it should be scored or shaved in one direction only, in preparation for a second base coat where required. Vertical surfaces should be scored horizontally. Second base coats should be floated uniformly as required to provide a surface receptive to the application of the finish coat. Subsequent coats may be applied once the Base Coat has set and developed sufficient rigidity to resist cracking or other physical damage when the next coat is applied.

6. **Finish Coat Application:** Base Coat must be allowed to set before Finish Coat application. Base Coats which have become dry should be evenly dampened with clean water to provide uniform suction. There should be no visible water on the surface when plaster is applied. Finish Coat should be applied using sufficient pressure to ensure tight contact with Base Coat.

The use of excessive amounts of water must be avoided in Finish Coat work. Finishing techniques and tools vary widely and have a pronounced effect on final appearance.

Always prepare a minimum 10 sq. ft. "mock-up" prior to large scale application, to determine the tools, techniques, and powder to liquid mixing ratios which will produce consistent satisfactory finishes.

7. Curing: While latex-modified plasters generally require no special curing under moderate conditions, water mixes and hot dry weather may require moist curing. Wet/dry curing is required for a minimum of 72 hours with water mixes. Moist curing is generally accomplished by applying a fine fog spray of water as frequently as necessary, usually once in the morning and once in the evening. This may be unsuitable, however, for finish coat applications which may be eroded or discolored by water fog.

#### **STORAGE AND HANDLING:**

Store powder in dry area, off the floor. Latex admixtures should be stored in a temperaturecontrolled area and kept from freezing. Properly stored, closed bags have a shelf life of 12 months from date of production.

Avoid skin and eye contact and avoid breathing dust. Contains cement and lime. May contain free silica. Use NIOSH-approved silica dust masks when handling dry components. Observe all safety and handling guidelines as detailed in the Safety Data Sheet supplied with this product.

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For further information or assistance, contact Edison Coatings.

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