Diamond Wall Three Coat is an excellent choice for scratch and brown coat in three-coat stucco applications. Three-coat stucco is recognized in the IBC/IRC building codes and remains one of the most popular exterior cladding choices for both residential, multi-family, and commercial projects.

Diamond Wall Three Coat offers a single source, durable, fire-resistant cladding with industry leading technical support and system warranties.

**System Description**

Three coat stucco is applied in three layers: ~3/8-inch thick scratch coat, ~3/8-inch brown coat, and ~1/8-inch finish coat. The approximately 7/8-inch system is applied by hand or machine over an approved water-resistive barrier and metal lath.

Diamond Wall Three Coat is a factory prepared blend of Type I-II portland cement complying with ASTM C150, chopped fibers, and proprietary ingredients. Diamond Wall Three Coat is a superb alternative to plastic cement and meets or exceeds job site requirements for portland cement plaster with lime. Diamond Wall produces a superior wall that can have a finish coat applied in as little as 24-hours after the brown coat.

**Design Considerations**

- May be applied over steel or wood framed construction over one of the following:
  - ASTM C1082, C933, C847 lath over open framing
  - ASTM C1396 water-resistant gypsum sheathing
  - ASTM C1177 glassmat faced gypsum sheathing
  - ASTM C1325 cement boards
  - ASTM C1278 gypsum fiber panels
  - Exterior grade or exposure 1 plywood
  - Exposure 1 OSB
  - Poured concrete or masonry

- Available in one-hour fire-resistive-rated assemblies

- Available in non-combustible assemblies

- Refer to the local code or ASTM C926 for three coat stucco design and application requirements, except for plaster proportions and mixing. Materials and mixing shall conform to the instructions found in the Diamond Wall Concentrate data sheet.

**Uses**

Diamond Wall Three Coat is an excellent exterior wall cladding for new or retrofit residential, multi-family, commercial, or institutional projects.

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Approved by: ____________________ Date: ____________________
System Components

The following products are components in the Diamond Wall Three Coat system. Please see the product’s data sheet for additional information.

Water-resistant Barrier
- Minimum No. 15 asphalt nonperforated felt complying with ASTM D 226 for Type I (UBC or IRC) or asphalt-saturated rag felt complying with UL Standard 55A (UBC)
- Minimum Grade D kraft building paper complying with UBC Standard 14-1 or ICC-ES Acceptance Criteria for water-resistant Barriers (AC38)
- Metal Lath: Complying with ASTM C847 (UBC or IRC) or with Table 25-B of the UBC as applicable

Lath
See ASTM C1063 for additional lath requirements.
- Woven Wire: Nominal No. 17 gage [0.058 inch], 1/2-inch opening, galvanized steel complying with ASTM C1032.
- Welded Wire: Nominal No. 16 gage [0.065 inch], 2-inch-by-2-inch opening, galvanized steel complying with ASTM C933.

Base Coat
Diamond Wall Three Coat is a factory prepared blend of portland cement complying with ASTM C150, chopped fibers, and proprietary ingredients.

Sand
Sand shall be clean and free from deleterious amounts of loam, clay, silt, soluble salts, or organic matter and shall be graded in accordance with ASTM C144, C897, or the sand must have a demonstrated performance record in similar construction and climate conditions.

Finishes
A variety of finish options are available:
- OmegaFlex Finishes: 100% acrylic-based finishes
- AkroFlex Finishes: 100% acrylic-based finishes
- AkroSil Finishes: Silicon enhanced acrylic-based finishes
- Akrolastic Finishes: Elastomeric acrylic-based finishes
- ColorTek Stucco: Portland cement-based stucco finishes
- AkroCoat: 100% acrylic paint
- Elastomeric 44: Elastomeric acrylic-based coating
- Valotino Finishes: Approved Valotino finishes
- Travertino: Portland cement-based limestone finish

System Upgrades
The following products are optional upgrades to the Diamond Wall Three Coat System. The use of these products will increase the system’s warranty.

Admixture
An optional Omega admixture may be added to Diamond Wall Three Coat for increased tensile, bond, and flexural strength.
- AkroLoc: A 100% acrylic polymer binder or admixture
- PolyLoc: Polyvinyl acetate (PVA) binder and admixture
- Admix 500: A 100% acrylic polymer admixture
- OmegaCure: A non-corrosive liquid admixture for accelerating the hydration of cement plaster

Primer
- OmegaFlex or AkroFlex Primer is recommended when using acrylic-based finishes.

Installation & Design Requirements
- Do not add additional plasticizers to Diamond Wall Three Coat mix.
- Substrates must be structurally sound, clean, and dry without planar irregularities greater than 1/4 inches in 10-feet.
- Maximum allowable deflection of structural wall components is 1/400 of the span.
- Expansion joints should be installed as detailed in ASTM C1063. Final expansion and control joint design and location are the responsibility of the design professional.
- Store and apply all component parts per the product’s data sheet. Do not use below grade. Terminate a minimum of 4-inches above grade, 2-inches above finished grade, or as specified by local code.
- All openings shall be properly flashed and designed to allow water to escape to the outside of the wall.
- All penetrations shall be properly flashed and/or sealed using approved methods.
- Walls should be designed to prevent bulk water from getting behind the stucco or running down the face of the stucco. The bottom of wall should have weep screed or another effective means to drain any water that may get behind the stucco.
- To reduce the likelihood of the stucco cracking, it is recommended the building carry a minimum of 90 percent of the dead building load and the interior gypsum be installed prior to installation of the stucco.
- Wood-bearer sheathing should be gapped 1/8-inch to allow for expansion and be attached per code requirements using corrosion resistant fasteners.
- Moist curing must be provided for a minimum 24 hours after coating applications. The length of time and most effective procedure for moist curing will depend on climatic and job conditions.
- Do not apply Diamond Wall Three Coat when the ambient and surface temperature is below 40ºF (4ºC). The use of OmegaCure will improve the hydration of Diamond Wall Three Coat at low temperatures.
- Plaster coats shall be protected from freezing for a period of not less than 24-hours after set has occurred.
- Protect applied product from inclement weather until set.
- Over masonry or cementitious substrates Diamond Wall Three Coat may be directly applied a maximum of 1/2-inch thick or as local code permits. Surfaces must be free from oil or other elements that could interfere with bonding. To improve the bond to the masonry or cement substrate, Omega Products recommends the use of Bondcrete. Applications over 1/2-inch require the use of lath.
- Sufficient slope on faces of plastered surfaces shall be provided to prevent water, snow, or ice from accumulating or standing.
- Optional EPS foam plant-ons may be used to add architectural detailing.
- Brown coat may be applied once the scratch coat has sufficient strength to hold the brown coat or as local codes permit. The time between coats will depend on climatic and job conditions.
- Some cement-based finishes, such as Omega ColorTek or Travertino, may be applied after a minimum cure time of 48-hours. Refer to finish product data sheet for additional application information.

Crack Isolation System
To help reduce the likelihood of cracking, an optional layer of fiber-glass mesh may be embedded into the Diamond Wall Three Coat brown coat or a skim coat with mesh may be applied over the Diamond Wall Three Coat base coat. See Omega’s Crack Isolation System Data Sheet for more information.

Disclaimer
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Technical Assistance
Technical assistance and information is available by calling Omega Products International, Inc. at (800) 600-6634 or FAX (951) 520-2594 or by e-mail at info@omega-products.com.

Warranty
The following is made in lieu of all expressed and implied rights, warranties and conditions, statutory or otherwise. The manufacturer’s only obligation shall be to replace such quantities of products proven to be defective within one year following receipt of data of such claim by the end-user. No other remedy is to be given, and any warranty, whether express or implied, is limited to 12 months from date of shipment. This warranty does not cover failure due to improper use, misuse, or neglect of the product by the manufacturer and/or the user. The manufacturer is not responsible for products that are subjected to unusual or inappropriate use or conditions. The manufacturer is not responsible for products that are subjected to conditions that are not within the control of the manufacturer. The manufacturer is not responsible for the use of products that are subjected to conditions that are not within the control of the manufacturer. The manufacturer is not responsible for the use of products that are subjected to conditions that are not within the control of the manufacturer.

1 Manufactured by others
2 When optional an acrylic admix is used, ColorTek Stucco or other cementitious finishes require the use of a bonding agent or an acrylic admixture.