Dryvit Interior Architectural Coatings

DS174

100% Acrylic Architectural Coatings For Interior Use

Dryvit Interior Architectural Coatings Specifications

An RPM Company

DRYVIT SYSTEMS, INC.
MANUFACTURER SPECIFICATION
SECTION 09960
DRYVIT INTERIOR ARCHITECTURAL COATINGS

PART I - GENERAL

1.01 SUMMARY:

A. This document contains all the Manufacturer's requirements for the proper design, use, and installation of the Dryvit Interior Architectural Coatings.
B. SECTION INCLUDES
   1. Interior Architectural Coatings
C. RELATED SECTIONS
   1. Unit Masonry – Section 04200.
   2. Concrete – Sections 03300 and 03400.
   3. Vapor Barriers – Section 07260.
   4. Gypsum Board Systems – Sections 09250 and 09260.

1.02 REFERENCES

A. ASTM B 117 (Federal Test Standard 141A Method 6061) Test Method of Salt Spray (Fog) Testing
B. ASTM C 67 Modified Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile
C. ASTM C 150 Specification for Portland Cement
D. ASTM C 177 Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus
E. ASTM C 203 Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation
F. ASTM C 272 Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions
G. ASTM C 297 Test Method for Tensile Strength of Flat Sandwich Constructions in Flatwise Plane
H. ASTM C 303 Test Method for Density of Preformed Block-Type Thermal Insulation
I. ASTM C 518 Test Method for Steady-State heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
J. ASTM C 1177 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
K. ASTM C 1396 Standard Specification for Gypsum Board
L. ASTM D 968 (Federal Test Standard 141A Method 6191) Test Method for Abrasion Resistance of Organic Coatings by Falling Abrasive
M. ASTM D 1621 Proc. A Test Method for Compressive Properties of Rigid Cellular Plastics
N. ASTM D 1622 Test Method for Apparent Density of Rigid Cellular Plastics
O. ASTM D 2247 (Federal Test Standard 141A Method 6201) Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity
P. ASTM D 2863 Test Method for Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion of Plastics (Oxygen Index)
Q. ASTM D 3273: Test Method for Resistance to Growth of Mold on Surfaces
R. ASTM D 4060 Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
S. ASTM E 84 Test Method for Surface Burning Characteristics of Building Materials
T. ASTM E 96 Test Methods for Water Vapor Transmission of Materials
U. ASTM E 2098 Test Method for Determining the Tensile Breaking Strength of Glass Fiber Reinforcing Mesh for use in Class PB Exterior Insulation and Finish Systems (EIFS), after Exposure to Sodium Hydroxide Solution
V. ASTM E 2134 Test Method for Evaluating the Tensile-Adhesion Performance of Exterior Insulation and Finish Systems (EIFS)
W. ASTM E 2485 (formerly EIMA Std. 101.01) Standard Test Method for Freeze-Thaw Resistance of Exterior Insulation and Finish Systems (EIFS) and Water-Resistive Barrier Coatings
X. ASTM G 23 (Federal Test Standard 141A Method 6151) Recommended Practice for Operating Exposure Apparatus (Carbon-Arc Type) With and Without Water, for Exposure of Nonmetallic Materials
Y. ASTM G 155 (Federal Test Standard 141A Method 6151) Standard Practice for Operating-Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials
Z. ASTM G 154 Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure Nonmetallic Materials
AA. DS159 Dryvit Water Vapor Transmission Data Sheet

1.03 DEFINITIONS

A. Contractor: The contractor that applies materials to the substrate.
B. Dryvit: Dryvit Systems, Inc., the manufacturer of the coating materials, a Rhode Island corporation.
C. Lamina: The layer consisting of the reinforced base coat and finish materials.
D. Finish: An acrylic based coating, available in a variety of textures and colors, which is applied to the prepared wall surface.

E. Reinforced Base Coat: The layer consisting of fiberglass reinforcing mesh fully embedded in the base coat material applied to the outside surface of the sheathing.
F. Reinforcing Mesh: Glass fiber mesh used to reinforce the base coat and to provide impact resistance.
G. Substrate: The material to which the Dryvit coatings are applied.

1.04 DESCRIPTION

A. General: Dryvit Interior Architectural Coatings consist of base coat and reinforcing mesh (where specified), acrylic primer and finish, applied to various interior wall and ceiling surfaces. **Note:** Refer to Dryvit publication DS561 for products appropriate for pool areas and other high humidity areas. The Dryvit finishes shall not be used in areas of direct water contact.
B. Design Requirements
1. Acceptable surfaces for Dryvit Interior Architectural Coatings include:
a. Concrete and Masonry.
b. Gypsum Wallboard meeting ASTM C 1396.
c. Fiberglass faced gypsum meeting ASTM C 1177.
d. Fiber reinforced cement or calcium silicate boards.
Note: Refer to Dryvit publication DS561 for acceptable substrates for pool areas and other high humidity areas.
2. Vapor Retarders: Use, type and location of vapor retarders within a wall assembly is the responsibility of the project designer and shall be noted on the project drawings and specifications.
C. Performance Requirements: As a minimum the Dryvit materials shall be tested in the following areas;

TEST	TEST METHOD	CRITERIA	RESULTS
Abrasion Resistance	ASTM D 968	No deleterious effects after 500 liters (528 quarts)	No deleterious effects after 1000 liters (1056 quarts)
Accelerated Weathering	ASTM G 155 Cycle 1	No deleterious effects after 2000 hours	No deleterious effects after 5000 hours
	ASTM G 154 Cycle 1 (QUV)		No deleterious effects after 5000 hours
Freeze-Thaw	ASTM E 2485 (formerly EIMA 101.01)	No deleterious effects after 60 cycles	Passed - No deleterious effects after 90 cycles
	ASTM C 67 modified	No deleterious effects after 60 cycles	Passed - No deleterious effects after 60 cycles
	ASTM E 2485/ICC-ES Proc. ICC ES (AC235)	No deleterious effects after 10 cycles	Passed - No deleterious effects after 10 cycles
Mildew Resistance	ASTM D 3273	No growth during 28 day exposure period	No growth during 60 day exposure period
Water Resistance	ASTM D 2247	No deleterious effects after 14 days exposure	No deleterious effects after 42 days exposure
Taber Abrasion	ASTM D 4060	N/A	Passed 1000 cycles
Salt Spray Resistance	ASTM B 117	No deleterious effects after 300 hours exposure	No deleterious effects after 1000 hours exposure
Water Vapor Transmission	ASTM E 96 Procedure B	Vapor permeable	EPS 5 perm-inch Base Coat* 40 Perms Finish** 40 Perms
Tensile Bond	ASTM C 297/E 2134	Minimum 104 kPa (15 psi) – substrate or insulation failure	Minimum 213.6 kPa (31 psi)
Surface Burning Characteristics	ASTM E 84	All components shall have a: Flame Spread $\leq$ 25 Smoke Developed $\leq$ 450	Passed
Reinforcing Mesh **Alkali Resistance of Reinforcing Mesh**	ASTM E 2098 (formerly EIMA 105.01)	> 21dN/cm (120 pli) retained tensile strength after exposure	Passed
EPS (Physical Properties) **Density**	ASTM C 303, D 1622	15.2-20.0 kg/m^3 (0.95-1.25 lb/ft^3)	Pass
Thermal Resistance	ASTM C 177, C 518	4.0 @ 4.4 °C (40 °F) 3.6 @ 23.9 °C (75 °F)	Pass Pass
Water Absorption	ASTM C 272	2.5 % max. by volume	Pass
Oxygen Index	ASTM D 2863	24% min. by volume	Pass
Compressive Strength	ASTM D 1621 Proc. A	69 kPa (10 psi) min.	Pass
Flexural Strength	ASTM C 203	172 kPa (25 psi) min.	Pass
Flame Spread	ASTM E 84	25 max.	Pass
Smoke Developed		450 max.	Pass

* Base Coat perm value based on Dryvit Genesis®
** Finish perm value based on Dryvit Quarzputz®

1.05 SUBMITTALS

A. Product Data – The contractor shall submit to the owner/architect manufacturer's product data sheets describing products, which will be used on this project.

B. Samples – The contractor shall submit to the owner/architect two samples of each finish, texture, and color to be used on the project. The same tools and techniques proposed for the actual installation shall be used to prepare the samples. Samples shall be of sufficient size to accurately represent each color and texture to be utilized on the project.

1.06 QUALITY ASSURANCE

A. Qualifications

1. Manufacturer: Shall be Dryvit Systems, Inc. All materials shall be manufactured or sold by Dryvit and shall be purchased from Dryvit or its authorized distributor.
   a. Materials shall be manufactured at a facility covered by a current ISO 9001:2008 and ISO 14001:2004 certification. Certification of the facility shall be done by a registrar accredited by the American National Standards Institute, Registrar Accreditation Board (ANSI-RAB).
2. Contractor*: Shall be knowledgeable in the proper installation of the Dryvit materials and shall be experienced and competent in the installation of the Dryvit Finish System for Interiors. Additionally the contractor shall possess a current trained contractor certificate from Dryvit for any of its Exterior Insulation and Finish Systems.

1.07 DELIVERY, STORAGE, AND HANDLING

A. All Dryvit materials shall be delivered to the job site in the original, unopened packages with labels intact.

B. Upon arrival, materials shall be inspected for physical damage, freezing, or overheating. Questionable materials shall not be used.

C. Materials shall be stored at the job site in a cool, dry location, out of direct sunlight, protected from weather and other damage. Minimum storage temperature shall be 7 °C (45 °F) for Color Prime™, 10 °C (50 °F) for Ameristone, and 4 °C (40 °F) for all other products.

1.08 PROJECT CONDITIONS

A. Environmental Requirements

1. At the time of application, the air and wall surface temperatures shall be minimum 7 °C (45 °F) for Color Prime, 10 °C (50 °F) for Ameristone, and 4 °C (40 °F) for all other products. These temperatures shall be maintained, with adequate air circulation, for a minimum of 24 hours thereafter, or until the products are dry.

B. Existing Conditions – The contractor shall have access to electric power, clean water, and a clean work area at the location where the Dryvit materials are to be applied.

1.09 SEQUENCING AND SCHEDULING

A. Installation of the Dryvit Interior Architectural Coatings shall be coordinated with other construction trades.

B. Sufficient manpower and equipment shall be employed to ensure a continuous operation, free of cold joints, scaffold lines, texture variations, etc.

1.10 LIMITED MATERIALS WARRANTY

A. Dryvit Systems, Inc. shall provide a written limited materials warranty against defective material upon written request. Dryvit shall have no liability for the application of the materials. Dryvit shall make no other warranties, expressed or implied. Dryvit is not liable for incidental or consequential damages.

1.11 DESIGN RESPONSIBILITY

A. It is the responsibility of both the specifier and the purchaser to determine, if a product is suitable for their intended use. The designer selected by the purchaser shall be responsible for all decisions pertaining to design, detail, structural capability, attachment, details, shop drawings, and the like. Dryvit has prepared guidelines in the form of specifications and product sheets to facilitate the design process only. Dryvit is not liable for any errors or omissions in design, detail, structural capability, attachment details, shop drawings, or the like, whether based upon the information prepared by Dryvit or otherwise, or for any changes which purchases, specifiers, designers, or their appointed representatives may make to Dryvit's published comments.

1.12 MAINTENANCE

A. Maintenance and repair shall follow the procedures noted in Dryvit publication, DS498.

B. All Dryvit products are designed to minimize maintenance. However, as with all building products, depending on location, some cleaning may be required. See Dryvit publication DS152 on Cleaning and Recoating.

PART II - PRODUCT

2.01 MANUFACTURER

A. All components of the Dryvit Interior Architectural Coatings shall be obtained from Dryvit or its authorized distributors.

2.02 MATERIALS

A. Portland Cement: Shall be Type I, I-II or II, meeting ASTM C 150, white or gray in color, fresh and free of lumps.
B. Water: Shall be clean and free of foreign matter.

2.03 COMPONENTS

A. Base Coat:
   1. Cementitious: A liquid polymer-based material, which is field mixed in a 1:1 ratio by weight with Portland Cement.
      a. Shall be Genesis or Primus®.
   2. Noncementitious: A factory mixed, fully formulated, water based product.
      a. Shall be NCB™.
   3. Ready mixed: A dry blend cementitious, co-polymer based product, field mixed with water.
      a. Shall be Primus® DM, Genesis® DM, Genesis® DMS.

B. Reinforcing Mesh: When specified, shall be a balanced open weave, glass fiber fabric treated for compatibility with other System materials.
   1. Shall be Dryvit Standard Mesh weighing 146 g/m^2 (4.3 oz/yd^2).
      a. It shall be colored blue for product identification bearing the Dryvit logo.

C. Primer (when specified):
   1. Shall be: Color Prime™ a pigmented, acrylic based primer used to improve adhesion and uniformity of finish color.

D. Dryvit Finish: Shall be the type, color and texture as selected by the owner/architect and shall be one or more of the following:
   1. Standard DPR (Dirt Pickup Resistance): Water based, acrylic coatings with integral color and texture and formulated with DPR chemistry:
      a. Quarzputz DPR: Open-texture pattern.
      b. Sandblast® DPR: Medium texture.
      c. Freestyle® DPR: Fine texture.
      d. Sandpebble® DPR: Pebble texture.
      e. Sandpebble® Fine DPR: Fine pebble texture.
      f. Sandblast® NTX (available only from Dryvit's California plant)
      g. Sandpebble® Fine NTX (available only from Dryvit's California and Oklahoma plants)
   2. E Finishes™: Water-based, lightweight acrylic coatings with integral color and texture and formulated with DPR chemistry:
      a. Quarzputz® E
      b. Sandpebble® E
      c. Sandpebble® Fine E
   3. Specialty Finishes
      a. Ameristone™: Multi colored quartz aggregate.
      b. Stone Mist®: Ceramically colored quartz aggregate.
      c. Custom Brick™: Acrylic polymer finish used in conjunction with a proprietary template system to create the look of stone, brick, slate or tile.
      d. Lymestone™: A premixed, 100% acrylic-based finish designed to replicate the appearance of limestone blocks.
      e. TerraNeo®: 100% acrylic-based finish with large mica chips and multi-colored quartz aggregates.
      f. Reflectit: 100% acrylic coating providing a pearlescent appearance.
   4. Medallion Series PMR™ (Proven Mildew Resistance) Finishes: Water based, acrylic finishes with integral color and texture:
      a. Quarzputz® PMR
      b. Sandblast® PMR
      c. Freestyle® PMR
      d. Sandpebble® PMR
      e. Sandpebble® Fine PMR
   5. Coatings, Primers and Sealers:
      a. Demandit®
      b. Tuscan Glaze™
      c. Revyvit®
      d. Color Prime
      e. Prymit®
      f. SealClear™

PART III - EXECUTION

3.01 EXAMINATION

A. Prior to installation of the Dryvit Interior Architectural Coatings, the contractor shall ensure that the substrate is of a type listed in section 1.04.B.1.

B. The contractor shall notify the general contractor and/or architect and/or owner of all discrepancies. Work shall not proceed until discrepancies have been corrected.

3.02 SURFACE PREPARATION

A. The substrate shall be prepared so as to be free of foreign materials such as oil, dust, dirt, form-release agents, efflorescence, loose paint, wax, water repellents, moisture, frost and any other materials that inhibit adhesion.

B. Concrete and masonry
   1. Shall be dry and cured a minimum of 28 days.
   2. All rough surfaces shall be skimmed with Dryvit Genesis or Genesis DM mixture to provide a smooth, flat and level base.

C. Gypsum Wallboard – Standard System
   1. All joints shall be taped and skimmed, fastener heads spotted with joint compound and sanded smooth.

D. Gypsum Wallboard – High Impact
   1. Surface shall be cleaned to remove all dust, dirt, or other contaminants that may impair the adhesion of a surface coating.

E. Plaster
   1. Plaster shall be finished smooth and allowed to cure a minimum of 28 days prior to application of finish.
   2. Surface shall be cleaned to remove all dust, dirt, or other contaminants that may impair the adhesion of a surface coating.

F. DensGlass Gold, DensShield, e^{2}XP™, Eterspan, Harditex, Hardiflex, Durock or other cement based sheathing boards.
   1. Surface shall be cleaned to remove all dust, dirt, or other contaminants that may impair the adhesion of a surface coating.

3.03 INSTALLATION

A. The Dryvit materials shall be mixed and applied in accordance with Dryvit's published product data sheets for the individual products specified.

B. Concrete and masonry
   1. Apply a continuous layer of Genesis or Genesis DM mixture over the entire wall surface to fill voids and provide a smooth level base for finish application.
   2. Allow the Genesis or Genesis DM mixture to cure a minimum of 24 hours until completely dry. Cool, humid conditions may require longer cure times.
   3. Using a brush, roller, or airless spray equipment, apply a coat of Color Prime over the dry Genesis, and allow to dry.
   4. Apply the specified finish in accordance with Dryvit's printed installation instructions.

C. Gypsum Wallboard – Standard System
   1. Using a brush, roller, or airless spray equipment, apply a coat of Color Prime over the prepared drywall and allow to dry.
   2. Apply the specified finish in accordance with Dryvit's published installation instructions.

D. Gypsum Wallboard – High Impact
   1. Apply a layer of base coat mixture to the wall surface at an approximate thickness of 1.6 mm (1/16 in). Immediately place the reinforcing mesh into the wet base coat layer and trowel smooth so the mesh is fully embedded. Lap adjacent pieces of mesh a minimum of 64 mm (2 ½ in). Continue until the entire wall surface is covered.
   2. Allow to cure a minimum of 24 hours until completely dry. Cool, humid conditions may require longer cure times.
   3. Using a brush, roller, or airless spray equipment, apply a coat of Color Prime over the prepared drywall and allow to dry.
   4. Apply the specified finish in accordance with Dryvit's published installation instructions.

E. Plaster
   1. Using a brush, roller, or airless spray equipment, apply a coat of Color Prime over the cured plaster and allow to dry.
   2. Apply the specified finish in accordance with Dryvit's published installation instructions.

F. DensGlass® Gold, Dens-Shield®, e^{2}XP, Eterspan®, Harditex®, Hardiflex®, Durock® or other cement based sheathing boards.
   1. Apply a layer of base coat mixture to the wall surface at an approximate thickness of 1.6 mm (1/16 in). Immediately place the reinforcing mesh into the wet base coat layer and trowel smooth so the mesh is fully

embedded. Lap adjacent pieces of mesh a minimum of 64 mm (2 ½ in). Continue until the entire wall surface is covered.

2. Allow to cure a minimum of 24 hours until completely dry. Cool, humid conditions may require longer cure times.
3. Using a brush, roller, or airless spray equipment, apply a coat of Color Prime over the prepared wall surface and allow to dry.
4. Apply the specified finish in accordance with Dryvit's published installation instructions.

3.04 FIELD QUALITY CONTROL

A. The contractor shall be responsible for the proper application of the Dryvit materials.
B. Dryvit assumes no responsibility for on-site inspections or application of its products.

3.05 CLEANING

A. All excess Dryvit materials shall be removed from the job site by the contractor in accordance with contract provisions.
B. All surrounding areas, where Dryvit coatings have been installed, shall be left free of debris and foreign substances resulting from the contractor's work.

3.06 PROTECTION

A. Dryvit coatings, and the project shall be protected from damage and exposure to dust and other contaminants until dry.

DISCLAIMER

Information contained in this specification conforms to standard detail and product recommendations for the installation of the Dryvit Interior Architectural Coatings products as of the date of publication of this document and is presented in good faith. Dryvit Systems, Inc. assumes no liability, expressed or implied, as to the architecture, engineering or workmanship of any project. To ensure that you are using the latest, most complete information, contact:

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*The Trained Contractor Certificate indicates certain employees of the company have been instructed in the proper application of Dryvit products and have received copies of Dryvit's Application Instructions and Specifications. The Trained Contractor Program is not an apprenticeship. Each trained contractor is an independent company experienced in the trade and bears responsibility for its own workmanship. Dryvit System's, Inc. assumes no liability for the workmanship of a trained contractor.