

PMR™ FINISHES & COATINGS

DS490

Proven Mildew Resistant Finishes and Coatings for Demanding Building Environments

Description

Dryvit Proven Mildew Resistant (PMR) finishes and coatings are designed to inhibit the growth of mildew in difficult mildew-prone environments. These 100% acrylic finishes and coatings incorporate state-of-the-art chemistry developed to help keep your building mildew free longer. Dryvit PMR finishes are available in eight textures: Quarzputz®, Quarzputz® **E**, Sandblast®, Freestyle®, Sandpebble®, Sandpebble® **E**, Sandpebble® Fine and Sandpebble® Fine **E**. Two smooth specialty coatings, Demandit® Smooth and Weathercoat™ are also available. All finishes and coatings are available in our standard colors as well as custom colors.

Uses

PMR finishes and coatings can be applied over properly prepared substrates such as Dryvit EIFS, exterior masonry, stucco, precast, cast-in-place concrete and other approved substrates. The finishes and coatings are also suitable for interior applications. All finishes can be trowel applied or spray applied with a hopper gun or pole gun-type sprayer. The coatings can be applied by spray, brush or roller.

Coverage

All coverages are approximate and depend upon substrate, details and individual application technique. The following finishes are shipped in 70 lb (32 kg) pails:

Quarzputz PMR: approximately 140 ft² (13 m²) per pail.

Sandblast PMR: approximately 150 ft² (14 m²) per pail.

Freestyle PMR: Must be calculated based on the texture desired. However, a coating thickness of 1.6 mm (1/16 in) to 1/4 in (6.4 mm) must be maintained.

Sandpebble PMR: approximately 130 ft² (12 m²) per pail.

Sandpebble Fine PMR: approximately 160 ft² (15 m²) per pail.

The following finishes are shipped in 40 lb (18 kg) pails:

Quarzputz E PMR: approximately 120 ft² (11 m²) per pail.

Sandpebble E PMR: approximately 130 ft² (12 m²) per pail.

Sandpebble Fine E PMR: approximately 160 ft² (15 m²) per pail.

The coverage of Demandit Smooth and Weathercoat on textured surfaces will vary depending upon type of texture, time of exposure, climate, and elevation exposure and conditions. The coverage of the first coat on textured surfaces can vary from 350-800 ft² (33-74 m²) per pail depending upon conditions. The coverage of the second coat on textured surfaces can vary between 450-1000 ft² (42-93 m²) per pail because the surface becomes more sealed and smoother. For best uniformity of appearance, two coats are always recommended for recoating finishes that have been exposed two years or longer. Coverage will be higher on smooth, primed surfaces. A test section is recommended to determine a more accurate coverage rate.

Texture

Quarzputz, Quarzputz **E**, Sandblast, Sandpebble, Sandpebble **E**, Sandpebble Fine and Sandpebble Fine **E** finishes achieve a texture which is governed by aggregate size as well as the trowel motion in finishing the wall. Quarzputz and Quarzputz **E** produce an open-textured pattern in a regular or random style. Sandblast produces a sand-like texture. Sandpebble and Sandpebble **E** produce a rough, pebbly texture, which is ideal for masking surface imperfections. Freestyle allows

almost any ornamental trowel texture to be achieved. Sandpebble Fine and Sandpebble Fine **E** produce a fine pebble texture. Demandit Smooth and Weathercoat are smooth coatings.

Properties

Drying Time - Drying of the finishes or coatings is dependent on the air temperature, relative humidity and finish or coating thickness. Under average drying conditions [70 °F (21 °C), 55% R. H.], the finish or coating will dry in 24 hours. Lower temperature and higher humidity will require that the PMR finish or coating be protected for longer periods. Protect work from rain during the drying period.

Testing Information

For individual test data on this product's properties, refer to the chart included with this document.

Application Procedure

Job Conditions - Air and surface temperature for application of finishes must be 40 °F (4 °C) and for coatings 45 °F (7 °C) or higher and must remain so for a minimum of 24 hours.

Temporary Protection - Shall be provided at all times until the PMR finish or coating is dry and permanent flashings, sealants, etc. are completed to protect the wall from inclement weather and other sources of damage.

Surface Preparation

- Surface must be smooth and free of imperfections to ensure satisfactory appearance.
- Interior and exterior surfaces must be above 40 °F (4 °C) when applying finishes and 45 °F (7 °C) when applying coatings and must be clean, dry, structurally sound and free of efflorescence, grease, oil, form release agents and curing compounds.

Dryvit Reinforced Base Coat -

The base coat must dry and have cured for a minimum of 24 hours before application of any finish.

- **Concrete** - Shall be dry and have cured a minimum of 28 days prior to application of the finishes. If efflorescence, form release agents or curing compounds are present on the concrete surface, the surface shall be thoroughly cleaned with an appropriate commercial cleaner or method to remove any residue that will affect surface adhesion. Refer to ASTM D 4261, D 4260, D 4259, and D 4258 for various options. All projections shall be removed and small voids filled with Dryvit Primus®, Primus® DM, Genesis® or Genesis® DM mixture. Dryvit Color Prime™ shall be applied to the prepared concrete surface using a roller or brush (see product data sheet for mixing and application) prior to application of the finish.
- **Masonry** - The masonry surface, with joints struck flush, shall be "skim coated" with Dryvit Primus, Primus DM, Genesis or Genesis DM mixture (see product data sheet for mixing and application) to produce a smooth, level surface.
- **Stucco** – Dryvit Color Prime™, Color Prime W or Primer with Sand™ shall be applied over the cured brown coat surface using a roller or brush (see product data sheet for mixing and application) prior to applying the finish. If additives are present in the stucco, a test patch shall be made and bond strength checked prior to application.

Mixing – Some settling of the finish may occur during shipping. Thoroughly mix the finish or coating with a "Twister" paddle or equivalent mixing blade powered by a 1/2 in (12.7 mm) drill, 450-500 rpm, until a uniform workable consistency is attained.

Finish Application –

- **Quarzputz PMR, Quarzputz E PMR or Sandblast PMR:** using a stainless steel trowel, apply and level a coat of Quarzputz PMR, Quarzputz E PMR or Sandblast PMR to a uniform thickness (Quarzputz PMR and Quarzputz E PMR: no thicker than largest aggregate; Sandblast PMR: applied in a thickness of 3/64 in (1.2 mm) – approximately 1 1/2 times largest aggregate). The textures are achieved by uniform hand motion and/or type of tool used. Maintain a wet edge for uniformity of color and texture.
- **Sandpebble PMR, Sandpebble E PMR: Sandpebble Fine PMR, and Sandpebble Fine E PMR:** roughly apply an even coat of finish to a thickness slightly thicker than the largest aggregate size. Then pull across the rough application coat using a horizontal trowel motion and develop a uniform thickness no greater than the largest aggregate of the material. The textures are achieved by uniform hand motion and/or type of tool used. Maintain a wet edge for uniformity of color and texture.
- **Freestyle PMR:** using a stainless steel trowel, apply a coat of the Freestyle PMR slightly thicker than 1/16 in (1.6 mm). The texture is either pulled out of this base or achieved by adding more Freestyle finish to the base layer using the same texturing motions that are used with other plaster materials, such as a skip trowel finish. The thickness of any Freestyle finish texture shall not exceed 1/4 in (6.4 mm).

Coating Application – Refer to Demandit Smooth and Weathercoat product data sheets DS400 and DS432, respectively.

Clean Up - Clean tools with water while the finishes or coatings are still wet.

Maintenance - All Dryvit products are designed to require minimal maintenance. However, as with all building products, depending on location, some cleaning may be required. See Dryvit publication DS152 on cleaning and recoating.

Storage

- Finishes must be stored at a minimum 40 °F (4 °C) and a maximum 100 (4 °C) in tightly sealed containers protected from weather and out of direct sunlight.
- Coatings must be stored at a minimum 45 °F (7 °C) and a maximum 100 (4 °C) in tightly sealed containers protected from weather and out of direct sunlight.

Cautions and Limitations

- Avoid applying PMR finishes and coatings in direct sunlight. Always work on the shady side of the wall or protect the area with appropriate shading material.
- Dryvit finishes and coatings must not be used on exposed exterior horizontal surfaces. Minimum slope is 6 in12 which is 27°. Maximum length of slope is 12 in (305 mm).
- Dryvit finishes and coatings shall not be used below grade when applied as the finish for an EIF system.
- Dryvit finishes and coatings are not intended for direct-applied, vertical applications over exterior gypsum based sheathing board, foam plastic insulation or other type insulation board.
- Dryvit finishes shall not be returned into any sealant joint. Instead a coat of Dryvit Color Prime or Dryvit Demandit Smooth shall be applied over the base coat that will be in contact with the sealant.

Technical and Field Services

Available on request.

PMR Finish Testing			
Test	Test Method	Criteria	Results ¹
Surface Burning Characteristics	ASTM E 84	ICC and ANSI/EIMA 99-A-2001 Flame Spread <25 Smoke Developed <450	Passed
Flexibility ²	ASTM D 522 Method B	No ICC or ANSI/EIMA Criteria	Passed: 2.0" diameter @ 73 °F
Water Vapor Transmission	ASTM E 96 Procedure B	ICC: Vapor Permeable No ANSI/EIMA Criteria	35 Perms
Accelerated Weathering	ASTM G 154 Cycle 1 (QUV)	ANSI/EIMA 99-A-2001 2000 hours: No deleterious effects ³	5000 hours: No deleterious effects ³
	ASTM G 155 Cycle 1 (Xenon Arc)	ICC: 2000 hours: No deleterious effects ³	5000 hours: No deleterious effects ³
Chalk Rating	ASTM D 4214 after ASTM G 154 Cycle 1	No ICC or ANSI/EIMA Criteria	Chalk rating: 8 after 5000 hours QUV
Instrumentally Measured Color Difference ⁴ (includes yellowing)	ASTM D 2244 CIELAB, 10° Observer after ASTM G 154 Cycle 1	No ICC or ANSI/EIMA Criteria	Color change: 1.05 Delta E after 5000 hours QUV
Freeze-Thaw Resistance	ASTM E 2485 (formerly EIMA 101.01)	ANSI/EIMA 99-A-2001 60 cycles: No deleterious effects ³	90 cycles: No deleterious effects ³
	ASTM E 2485 ICC – ES Proc. (AC212)	ICC: 10 cycles No deleterious effects ³	10 cycles: No deleterious effects ³
Mildew Resistance	ASTM D 3273 (formerly Mil Std-810B)	ANSI/EIMA 99-A-2001 28 days: No growth	60 days: No growth
Salt Spray Resistance	ASTM B 117	ICC and ANSI/EIMA 99-A-2001 300 hours: No deleterious effects ³	1000 hours: No deleterious effects ³
Water Resistance	ASTM D 2247	ICC and ANSI/EIMA 99-A-2001 14 days: No deleterious effects ³	42 days: No deleterious effects ³
Abrasion Resistance	ASTM D 968 Method A Falling Sand	ANSI/EIMA 99-A-2001 528 quarts (500 liters): No deleterious effects ³	1057 quarts (1000 liters): No deleterious effects ³
	ASTM D 4060 Taber Abrasion (1 kg load)	No ICC or ANSI/EIMA Criteria	1000 cycles: .91 mg loss
Adhesion to Concrete	ASTM D 4541	ICC and ANSI/EIMA 99-A-2001 15 psi minimum	>200 psi
Tensile Bond	ASTM C 297/E 2134 (formerly EIMA 101.03)	ICC and ANSI/EIMA 99-A-2001 15 psi minimum	>25 psi
Algae Resistance	SS 345:1990 (Appendix B)	No ICC or ANSI/EIMA Criteria	8 weeks; No algae growth

1. Testing referenced is based on Quarzputz Pastel Base finish.
 2. Finish applied over aluminum panels, bent on cylindrical mandrels as described in ASTM D 522 Method B. Lower diameter indicates higher flexibility.
 3. No cracking, checking, rusting, crazing, erosion, blistering, peeling, or delamination when viewed under 5x magnification.
 4. Delta E is total color difference, including yellowing, lightening, darkening, changes in red, blue, and green color values. Finish exposed to 5,000 hours of QUV prior to evaluating Delta E.

Dryvit Systems, Inc.
 One Energy Way
 West Warwick, RI 02893
 (800) 556-7752
 www.dryvit.com

Information contained in this product sheet conforms to the standard detail recommendations and specifications for the installation of Dryvit Systems, Inc. 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 Dryvit Systems, Inc.



For more information on [Dryvit Systems](#) or [Continuous Insulation](#), visit these links.