

Genesis® DMS

DS471

Sprayable, Dry Mix, Polymer-Modified, Cementitious Fiber-Reinforced Adhesive and Base Coat

Description

Genesis DMS is a sprayable, dry mix, polymer-modified, cementitious adhesive and base coat for use with Dryvit systems. Genesis DMS may be applied as an adhesive to either the substrate or the EPS.

Uses

Genesis DMS is used to adhere expanded polystyrene insulation board to acceptable substrates and to embed reinforcing mesh as part of the base coat for Dryvit systems. Genesis DMS is specifically formulated for spray applications. Genesis DMS may also be used for non-spray applications (e.g., notchtroweling on substrates).

Coverage

Approximately 55–60 ft² (5.1 - 5.6 m²) of surface area per 50 lb (22.7 kg) bag, including adhesive and base coat layers. For adhesive only, 100–110 ft² (9.3 – 10.2 m²); for base coat only, 120–130 ft² (11.1 - 12 m²).

Properties

Working Time - After mixing, the working time of the Genesis DMS is approximately 1-3 hours, depending on the ambient weather conditions.

Drying Time - Drying time of the Genesis DMS mixture is dependent on the air temperature and relative humidity. Under average drying conditions [70 °F (21 °C), 55% R.H.], the Genesis DMS will dry in 24 hours. Protect work from rain for at least 24 hours. Being a cementitious product, the Genesis DMS mixture develops full strength in 28 days. When used to bond expanded polystyrene insulation board to an acceptable substrate, a period of at least 24 hours must elapse prior to rasping to allow the Genesis DMS mixture to form a positive bond. The installed insulation board should not be disturbed until adequate bond has developed.

Testing Information

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

Application Procedure

FOR COMPLETE APPLICATION INSTRUCTIONS, REFER TO THE

APPROPRIATE DRYVIT SYSTEM APPLICATION INSTRUCTIONS.

Job Conditions – Air and surface temperatures for application of the Genesis DMS must be 40 °F (4 °C) or higher and must remain so for a minimum of 24 hours. Genesis DMS shall not be applied to the substrate when substrate and/or air temperatures are above 100 °F (38 °C).

Temporary Protection – Shall be provided at all times until the adhesive, base coat, finish, and installation of permanent flashings, sealants, etc. are completed to protect the wall from inclement weather and other sources of damage.

Acceptable Substrates:

- Exterior grade gypsum sheathing meeting ASTM C 1396 (formerly C 79) requirements for water-resistant core or Type X core
- Exterior sheathing having a water-resistant core with fiberglass mat facers meeting ASTM C 1177
- Exterior fiber reinforced cement or calcium silicate boards
- Unglazed brick, cement plaster, concrete or masonry
- Galvanized expanded metal lath 2.5 or 3.4 lbs/yd² (1.4 or 1.8 kg/m²) installed over a solid substrate

Surface Preparation:

- Surfaces must be above 40 °F (4 °C) and must be clean, dry, structurally sound and free of efflorescence, grease, oil, form release agents and curing compounds.
- The substrate shall be flat within 1/4 in (6.4 mm) in any 4 ft (1.2 m) radius.
- For direct application on substrate including troweling or spray/troweling, substrate shall be clean, smooth and free of voids and projections. Mortar joints in masonry shall be struck flush. Recessed mortar joints and other voids shall be skimmed to provide a smooth surface. Material used to smooth and fill can be Genesis®, Genesis® DM or Genesis DMS. **Genesis DMS is not acceptable as an adhesive direct to wood-based**

sheathings, but may be applied directly to substrates coated with Backstop® NT™.

Mixing

Sprayer – Connect a source of clean, cool potable water to a spray machine suitable for EIFS applications. Regulate the water flow rate to provide the desirable mixing consistency of material. Material may thicken up upon leaving the mixing cylinder at a given water flow and loosen up after pumping. Genesis DMS provides a good safe margin for mixing and pumping that may allow the mixture to be pumped at a relatively thick consistency. The consistency for application must be determined after pumping.

Pail – One 50 lb (22.7 kg) bag of Genesis DMS will produce approximately 5 gal (19 L) of Genesis DMS mixture. Add 7 - 9 quarts (6.6 - 8.5 L) of clean, cool potable water into a clean plastic container. Add the Genesis DMS slowly while continuously mixing with a "Twister" paddle or equivalent mixing blade powered by a 1/2 in (12.7 mm) drill at 500 – 1200 rpm. **NOTE: A minimum 7 amp drill works best for Portland cement based materials.** Thoroughly mix until uniformly wetted, adjusting consistency with a small amount of water or Genesis DMS. Allow the mixture to set for 5 minutes, then re-temper, adding a small amount of water if necessary. Material must be free of lumps before using.

Mortar Mixer – Add 7 - 9 quarts (6.6 - 8.5 L) of clean, cool potable water for each 50 lb (22.7 kg) bag of Genesis DMS into a clean mortar mixer. Add the Genesis DMS while the mixer is running. Let mix 3-5 minutes, shut mixer off for 5 minutes, then run mixer for another 2-3 minutes. Re-temper adding a small amount of water if necessary. Material must be free of lumps before using. The pot life is 1-3 hours depending on weather.

Application

Adhesive – Genesis DMS is applied to the substrate. Use spray equipment and a stainless steel

notched trowel with notches measuring 3/8 in (9.5 mm) wide, 1/2 in (12.7 mm) deep spaced 1 1/2 in (8 mm) apart. As an alternative, the Genesis DMS may be applied to the back of the EPS insulation board. Apply the Genesis DMS mixture on the back side of the insulation board and scrape the excess adhesive from between the adhesive beads. The adhesive beads shall be applied so that they run vertically when the insulation board is placed on the wall.

CAUTION: Immediately place the insulation board on the substrate, ensuring that no Genesis DMS mixture gets into board joints. Do not allow the Genesis DMS mixture to form a skin before positioning the insulation board on the substrate as it will affect the bond strength.

Base Coat – For base coat application all insulation board irregularities greater than 1.6 mm (1/16 in) must be sanded flush. Apply the base coat to the entire surface of the insulation board using a trowel or spray equipment. Fully embed the Dryvit reinforcing mesh in the wet base coat troweling from the center to the edge of the reinforcing mesh so as to avoid

wrinkles. The reinforcing mesh shall be continuous at all corners and lapped or butted in accordance with Dryvit's recommendations. The overall minimum base coat thickness shall be sufficient to fully embed the reinforcing mesh. The recommended method is to apply the base coat in two applications. All areas requiring higher impact resistance shall be detailed on the plans and described in the contract documents. The application shall be installed in accordance with Dryvit's recommendations.

Clean Up – Clean tools with water while the Genesis DMS mixture is still wet.

Storage
Genesis DMS bags must be protected from moisture and weather. The bags shall be stored off the ground in a cool, dry location out of direct sunlight. If the Genesis DMS is warm or hot, the pot life of the Genesis DMS mixture will be reduced.

The shelf life is 1 year from date of manufacture when properly stored in unopened bags.

Cautions and Limitations

- Avoid applying Genesis DMS in direct sunlight. Always work on the shady side of the wall or protect the area with appropriate shading material.
- Clean, cool potable water may be added to adjust workability. Do not over-water. Warm water will accelerate the set.
- Genesis DMS mixture shall not be used to adhere EPS directly to wood-based substrates.
- Mixing paddles and pails must be clean. Contamination from previous mixing will lead to a short pot life.
- Wear protective eyewear and clothing since the product contains cement, which can cause irritation.
- Periodically remove an EPS board to check for proper adhesion.

Technical and Field Services

Available on request.

Genesis DMS Testing			
Test	Test Method	Criteria	Results
Freeze-Thaw Resistance	ASTM E 2485/ICC-ES Proc.; ICC ES (AC219*)	No deleterious effects ¹ after 10 cycles	Passed – No deleterious effects ¹ after 10 cycles
Water Resistance	ASTM D 2247	ICC and ANSI/EIMA 99-A-2001 14 days: No deleterious effects ¹	14 days: No deleterious effects ¹
Tensile Bond ²	ASTM C 297/E 2134 (formerly EIMA 101.03)	ICC and ANSI/EIMA 99-A-2001: Minimum 15 psi (104 kPa) – substrate or insulation failure	>15 psi (104 kPa)
Water Penetration	ASTM E 331	No water penetration beyond the inner-most plane of the wall after 2 hours at 6.24 psf (299 Pa)	Passed
1. No cracking, checking, rusting, crazing, erosion, blistering, peeling, or delamination when viewed under 5x magnification. 2. Sample consists of 1" EPS adhered to various substrates * AC219 – Acceptance Criteria for EIFS			

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