

Acrylic-Modified, Fiber-Reinforced Adhesive, Base and Leveling Coat

Description

Genesis is a fiber-reinforced, 100% acrylic-modified product which, is mixed in a 1 to 1 ratio by weight with Portland cement to produce the Genesis mixture. It provides a high-build, exceptionally easy to trowel adhesive, base or leveling coat.

Uses

The Genesis mixture is used to adhere insulation board to an acceptable substrate and to embed Dryvit reinforcing mesh as part of the base coat for Dryvit's systems. It shall be used as the base coat for mechanically fastened Dryvit systems. It may also be used as a high-build, crack-resistant, cementitious leveling coat to skim rough masonry and to fill small voids in cementitious substrates.

Coverage

Approximately 140 ft² (13 m²) of surface area per 60 lb (27 kg) pail. This includes adhesive and base coat layers. When used with the Outsulation® X System, the coverage for adhesive is approximately 260 sf (24.2 m²) per pail and for base coat approximately 120 sf (11.1 m²) per pail. The coverage for other applications is dependent upon the surface of the substrate and the thickness of the application.

Properties

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

Drying Time – When used to bond expanded polystyrene insulation board to an acceptable substrate, a period of 24 hours must elapse to allow the Genesis mixture to form a positive bond. The insulation board should not be worked on while the Genesis mixture is curing. The drying time of the Genesis mixture is dependent upon the air

temperature and relative humidity. Under average drying conditions [70 °F (21 °C), 55% R.H.], the Genesis mixture will dry in 24 hours. Protect work from rain for at least 24 hours. Being a cementitious product, the Genesis mixture develops full strength in 28 days.

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 APPROPRIATE DRYVIT SYSTEM APPLICATION INSTRUCTIONS.

Job Conditions – Air and surface temperatures for the application of the Genesis mixture must be 40 °F (4 °C) or higher and must remain so for a minimum of 24 hours.

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, concrete or masonry
- New or existing cement plaster
- 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 a 4 ft (1.2 m) radius.

Mixing - Thoroughly pre-mix the Genesis material. Into a clean plastic container, pour 1/2 of the freshly mixed Genesis 30 lbs (13.5 kg). To each half pail of Genesis, add 1 qt (950 ml) of clean potable water and 1/3 of a bag [approximately 30 lbs (13.5 kg)] of fresh, lump-free Type I or Type II Portland cement. Add the cement slowly and mix thoroughly. Additional water may be added to the Genesis mixture to achieve a workable consistency. **DO NOT OVERWATER THE GENESIS MIXTURE AS THIS WILL DEGRADE THE PERFORMANCE OF THE PRODUCT.** Allow the mixture to set for 10 - 15 minutes. Re-mix and temper by adding a small amount of water to achieve the desired workability.

Application

Adhesive – For application over **sheathing substrates** use 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 (38 mm) apart. Apply the Genesis 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. For application over **non-sheathing substrates**, the notched-trowel application as described previously is acceptable or a ribbon and dab application may be used. With a stainless steel trowel, apply a ribbon of the Genesis mixture 2 in (51 mm) wide by 3/8 in (9.5 mm) thick around the entire perimeter of the insulation

Genesis

board. Place eight dabs of the Genesis mixture 3/8 in (9.5 mm) thick by 4 in (102 mm) in diameter approximately 8 in (203 mm) on center to the interior area.

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

Skim coat over concrete or masonry - Use a stainless steel trowel to apply the Genesis mixture on the substrate. The Genesis mixture shall be installed at a maximum thickness of 1/4 in (6.4 mm).

Base Coat – For base coat application, all insulation board irregularities greater than 1/16 in (1.6 mm) must be sanded flush. Apply the Genesis mixture to the entire surface of the insulation

board. 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. When used as a base coat for the Outsulation X System, Genesis shall be applied at the recommended coverage rate. 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 in accordance with Dryvit's recommendations.

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

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Storage

Genesis must be stored at a minimum of 40 °F (4 °C) and a maximum of 100 °F (38 °C) in tightly sealed containers protected from weather and out of direct sunlight.

Cautions and Limitations

- Clean potable water may be added to adjust workability. Do not add water until after the cement is thoroughly mixed. Do not overwater.
- Use only Type I or Type II gray or white Portland cement.
- The Genesis mixture shall not be used to adhere EPS directly to wood based substrates.
- Avoid applying Genesis in direct sunlight. Always work on the shady side of the wall or protect the area with appropriate shading material.
- For base coat applications over EPS, do not apply the Genesis mixture in thicknesses exceeding 1/8 in (3.2 mm).

Technical and Field Services

Available on request.

Genesis® Testing			
Test	Test Method	Criteria	Results
Surface Burning Characteristics	ASTM E 84	ICC and ANSI/EIMA 99-A-2001 Flame Spread <25 Smoke Developed <450	Passed
Water Vapor Transmission	ASTM E 96 Procedure B	ICC: Vapor Permeable No ANSI/EIMA Criteria	40 Perms
Accelerated Weathering	ASTM G 154 Cycle 1 (QUV)	ANSI/EIMA 99-A-2001 2000 hours: No deleterious effects ¹	5000 hours: No deleterious effects ¹
	ASTM G 155 Cycle 1 (Xenon Arc)	ICC: 2000 hours: No deleterious effects ¹	2000 hours: No deleterious effects ¹
Freeze-Thaw Resistance	ASTM E 2485 (formerly EIMA 101.01)	ANSI/EIMA 99-A-2001 60 cycles: No deleterious effects ¹	90 cycles: No deleterious effects ¹
Water Resistance	ASTM D 2247	ICC and ANSI/EIMA 99-A-2001 14 days: No deleterious effects ¹	42 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)
Transverse Wind Load	ASTM E 330	Wall assembly shall withstand positive and negative wind loads as specified by the building code	Minimum 90 psf (4.3 kPa) ³ 16 inch o.c. framing, 1/2 in sheathing screws attached at 8 in (203 mm) o.c.
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
Fire Resistance	ASTM E 119	No effect on the fire resistance of a rated wall assembly	Passed 1 hour Passed 2 hour
Ignitability	NFPA 268	No ignition at 12.5 kw/m ² at 20 minutes	Passed
Full Scale Multi-Story Fire Test	UBC Std. 26-4 (formerly 17-6)	1. Resist vertical spread of flame within the core of the panel from one story to the next 2. Resist flame propagation over the exterior surface 3. Resist spread of vertical flame over the interior surface from one story to the next 4. Resist significant lateral spread of flame from the compartment of fire origin to adjacent spaces	Passed
Intermediate Multi-Story Fire Test	NFPA 285 (UBC 26-9)	1. Resist flame propagation over the exterior surface 2. Resist vertical spread of flame within combustible core/component of panel from one story to the next 3. Resist vertical spread of flame over the interior surface from one story to the next 4. Resist lateral spread of flame from the compartment of fire origin to adjacent spaces	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
3. All Dryvit components remain intact – for higher wind loads contact Dryvit Systems, Inc.

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