

MAPESEAL® GC

SINGLE-COMPONENT, FAST-CURING, MONOLITHIC WATERPROOFING MEMBRANE THAT CAN BE APPLIED TO DAMP AND GREEN CONCRETE

PRODUCT DESCRIPTION

Mapeseal GC is a fast-curing, 100%-solids, cold-fluid-applied, single-component, moisture-curing, structural waterproofing membrane that will not shrink and is VOC-compliant in virtually all municipalities. Very low in odor, it is well suited for use in and around occupied spaces. Thanks to advanced proprietary technology, this single-grade membrane can be used on both vertical and horizontal surfaces, as well as, for green concrete applications. For critical applications, the system can be reinforced with Mapeseal Fabric. Mapeseal GC can be applied by roller, brush, trowel, or squeegee.

FEATURES AND BENEFITS

- Single-grade membrane for vertical and horizontal applications
- Suitable for green concrete
- Can be applied in a variety of thicknesses, or with reinforcement, making it customizable to any job
- Seamless and monolithic
- Does not require a primer
- Applies easily with no mixing or special equipment required
- Free of solvents
- Very low odor
- Free of tar and asphalt
- Compatible with common construction materials such as concrete, concrete masonry units (CMUs), stone, metal, plastic (PVC and ABS), exterior grade plywood and insulating concrete forms (ICF)

SYSTEM COMPONENTS

- Mapeseal Fabric, spunbond, non-woven polyester fabric used as a reinforcement for Mapeseal GC
- Mapeproof Liquid Membrane, trowel grade liquid detailing accessory
- Mapedrain HS, high-strength, high-flow drainage mat with protective film
- Mapestrip 25, expanding rubber waterstop for watertight joints and transitions

TECHNICAL DESCRIPTION

| Property | Test Method | Result |
|---|---------------------|---|
| Solids content | ASTM D1644 | 100% |
| VOC | | 22 g/L |
| Resistance to water | ASTM D2939 | No blistering No reemulsification |
| Tensile Strength | D412 | 381 psi |
| Elongation | D412 | 210% |
| Water Vapor Permeance | ASTM E96 (wet cup) | 0.04 Perm inch |
| Extensibility after heat aging | ASTM C1522 | Pass @ 0.25" |
| Weight Loss | ASTM C836 | Pass |
| Adhesion-in-peel | AC29 and ASTM C836 | 6.4 lbf |
| Hardness | ASTM D2240, Type OO | 87 |
| Resistance to decay | AC29 | Pass |
| Minimum application temperature | | 40°F (4°C) |
| Approximate curing time, at 70°F (21°C) and 50% relative humidity | | Skin Time: 2 hours Initial set time: 24 hours Full Cure: 72 hours |
| Rain-resistant, at 70°F (21°C) and 50% relative humidity | | After 2 hours |
| Required curing time for concrete substrates | | 3 days |



PRODUCT DATA

| | |
|-------------------|-----------------------|
| Pails..... | 5 U.S. gals. (18.9 l) |
| Gross Weight..... | 70 lbs (31.7 kg) |
| Net Weight..... | 66.8 lbs (30.3kg) |
| Pails/Pallet..... | 36 |

APPROVALS & CERTIFICATIONS

- Miami-Dade County Product Control Approved
- Florida Building Code



WHERE TO USE

- Vertical and horizontal waterproofing on structural foundation walls and decks
- Vertical and horizontal waterproofing on tunnels, plaza decks, balconies, split slabs, courtyards, planters, parking decks and bridges
- Interior applications such as bathrooms, kitchens, mechanical rooms, and laboratories
- Suitable for use in confined spaces and occupied buildings
- Used as primary waterproofing under tile and stone applications

PRODUCT CODES

- 2438636UPY



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COVERAGE

| Thickness | Coverage |
|-----------|---------------------------------------|
| 60 mils | 26.7ft² per U.S. gal. (0.65 m² per L) |
| 90 mils | 17.8ft² per U.S. gal. (0.44 m² per L) |
| 120 mils | 13.3ft² per U.S. gal. (0.33 m² per L) |
| 215 mils | 7.5ft² per U.S. gal. (0.18 m² per L) |

Coverage rates are theoretical and can vary significantly based on substrate profile and detailing requirements.

STORAGE AND SHELF LIFE

Shelf life 12 months when protected from UV light and stored in a dry environment at temperatures between 40°F (4°C) and 90°F (32°C).

LIMITATIONS

- Applications are limited to substrate and ambient temperatures as low as 40°F (4°C).
- Do not apply Mapeseal GC when rain is imminent.
- Not intended for permanent UV exposure. Mapeseal GC should be covered as soon as possible after application.
- Not recommended for pond and tank liner applications except for between-slab applications.
- Not compatible with asphalt-based products. Contact a Polyglass representative for detailed instructions if Mapeseal GC is to encounter an asphalt-based product.
- Do not install over substrates containing asbestos.
- Not to be used as a wearing surface.
- If a metal pan is used for concrete form, the metal pan must be vented.
- Not approved for use with potable water.
- To be used for positive-side applications only.

SUITABLE SUBSTRATES AND SURFACE PREPARATION

Before installing Mapeseal GC, the substrate must be properly prepared.

- *Preparation:* Do not apply Mapeseal GC to frozen or wet substrates. The membrane should be protected from direct sunlight as soon as possible after installation. Mapeseal GC can be applied to concrete, metal, plastic, exterior grade plywood, insulated wall systems and masonry surfaces. All substrates must be clean, dry, and free of voids, protrusions, spalled areas, loose aggregate, and surface irregularities. Remove contaminants such as grease, oil, and wax from exposed surfaces. Also remove dust, dirt, loose stone, and debris.
- *Chemical additives:* Concrete should be cured by the water-curing method. Any curing compounds must be of the pure sodium silicate type or clear resin-based materials without waxes, oils, or pigments, and must be approved by a Polyglass Technical Service. Form-release agents must not

transfer to the concrete. Do not use petroleum oils, diesel fuel, paraffin wax or silicon-based products. Remove forms as soon as possible from below horizontal slabs to prevent moisture entrapment. Excess moisture could result in blistering of the membrane. Curing compounds and form-release agents that adversely affect the adhesion of Mapeseal GC must be removed from the substrate before application.

- *Temperature:* Apply Mapeseal GC only in dry weather or when precipitation is not imminent, and when the ambient and substrate temperatures are above 40°F (4°C).
- *Concrete substrates:* Structural concrete must be cured at least 3 days. Damp substrates are acceptable but should have no visible standing water. Repair any surfaces that are not structurally sound or have voids, protrusions, rough spalled areas, loose aggregate, or exposed coarse aggregate. Any voids exceeding 1/4" (6 mm) in width should be filled with latex Portland cement, concrete or epoxy concrete, and should be troweled smooth to match the existing surface. Protrusions and other rough areas should be broken off or ground down and patched with latex Portland cement. For instructions regarding cracks, refer to page 3.
- *Masonry substrates:* Install Mapeseal GC over smooth concrete masonry units (CMUs) with mortar joints struck flush with the face of the concrete blocks. If concrete blocks are rough or the mortar joints are tooled, the surface should be parged to provide a smooth surface. Allow the parge coat to dry 24 hours before applying Mapeseal GC. New CMU mortar joints should be tooled full and flush.
- *Priming:* Priming is not required for adhesion. However, if pinhole and blister problems are likely to occur due to air and/or moisture vapors being trapped or emitted from the concrete, a thin-mil application of Mapeseal GC is recommended to remove trapped air/vapor. This thin-mil application of Mapeseal GC will promote adhesion to the substrate and establish a cohesive bond with the subsequent coat of Mapeseal GC.

PRODUCT APPLICATION

DETAILING

Wall/footing transitions:

- Install Mapestrip 25 in all concrete cold-pour joints.
- Create a cant at all vertical-to-horizontal transitions by applying a cant bead of Mapeproof Liquid Membrane or an Polyglass approved sealant measuring 3/4" (19 mm) and allow it to skin over.
- Apply a Mapeseal GC coat of 60 wet mils extending at least 4" (10 cm) onto the wall and footing.



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Deck/curb or parapet flashing:

- Install Mapestrip 25 in all concrete cold-pour joints.
- Create a cant at all vertical-to-horizontal transitions by applying a cant bead of Mapeproof Liquid Membrane or a Polyglass approved sealant measuring $\frac{3}{4}$ " (19 mm) and allow it to skin over.
- Apply a Mapeseal GC coat of 60 wet mils extending at least 4" (10 cm) onto the deck/curb or parapet flashing.

Wall inside corners:

- Create a cant at all wall inside corners by applying a cant bead of Mapeproof Liquid Membrane or a Polyglass approved sealant measuring $\frac{3}{4}$ " (19 mm) and allow it to skin over.
- Apply a Mapeseal GC coat of 60 wet mils at each inside corner extending at least 4" (10 cm) onto each wall.

Wall outside corners:

- Apply a Mapeseal GC coat of 60 wet mils at each outside corner extending at least 4" (10 cm) onto each wall.

Concrete joints and cracks greater than $\frac{1}{16}$ " (1.5 mm) wide:

- Install Mapestrip 25 in all concrete cold-pour joints and around all penetrations in concrete walls and slabs.
- Saw-cut all cracks greater than $\frac{1}{16}$ " (1.5 mm) wide, making them $\frac{1}{4}$ " (6 mm) wide and $\frac{1}{4}$ " (6 mm) deep. After removing dust from the saw cuts, fill them with Mapeproof Liquid Membrane or Polyglass approved sealant and allow it to skin over.
- Apply a Mapeseal GC coat of 60 wet mils extending at least 4" (10 cm) onto each side of joint or crack.

Cracks less than $\frac{1}{16}$ " (1.5 mm) wide:

- Apply a Mapeseal GC coat of 60-wet mils extending at least 4" (10 cm) onto each side of all cracks less than $\frac{1}{16}$ " (1.5 mm) wide.
- Allow it to skin over.

Penetrations:

- Install Mapestrip 25 around all penetrations in concrete walls and slabs.
- Mechanically abrade and clean metal and PVC penetrations.
- Create a cant around penetration where it meets the substrate by applying a cant bead of Mapeproof Liquid Membrane or Polyglass approved sealant measuring $\frac{3}{4}$ " (19 mm) and allow it to skin over.
- Apply a Mapeseal GC coat of 60 wet mils extending at least 4" (10 cm) onto the wall and penetration.

Terminations:

- Mapeseal GC is self-terminating.
- Terminate the membrane 4" to 6" (10 to 15 cm) below grade for foundation applications. Terminate the membrane 1" to 2" (2.5 to 5 cm) from exterior face of substrate for above-grade applications.

SYSTEM INSTALLATIONS

Mapeseal GC can be applied in two types of systems. Reinforced systems are used for critical waterproofing for split slabs, plaza decks, courtyards, and green roofs, as well as for below-grade waterproofing. Single-coat systems are used for general waterproofing such as foundation walls and planters. For either type of system, Mapeseal GC can be applied with a short-nap roller ($\frac{3}{8}$ " or 10 mm), brush, trowel or squeegee.

Reinforced systems:

- Apply the first coat of Mapeseal GC at least 60-mils thick.
- Immediately after the first coat is applied, install the Mapeseal Fabric into the first coat while it is wet.
- Apply the second coat of Mapeseal GC on the same day, at least 60 mils thick. The Mapeseal Fabric must be covered on the same day with the second coat of Mapeseal GC.
- Allow the system to cure for 24 hours. Then install the protection course to avoid damage from other trades, construction materials, backfill or overburden. Use an appropriate Mapedrain™ drainage composite. The Mapedrain drainage composite should be adhered to the membrane using Mapeprime™ 720 W adhesive primer or an approved adhesive. For applications where positive drainage is not desired, rigid insulation may be used. *Note: Rigid insulation does not provide positive drainage to the system and that various warranties require specific protection products or materials. Contact Polyglass Technical Service for recommendations.*
- Place backfill or overburden as soon as possible. Use care during the backfill operation to avoid damage to the waterproofing system. Follow generally accepted industry practices for backfilling and compaction. Backfill should be added and compacted in lifts from 6" to 24" (15 to 61 cm) and compacted to 85% modified proctor.

Single-coat systems:

- Apply a coat of Mapeseal GC at least 60 mils thick.
- Allow the system to cure for 24 hours. Then install the protection course to avoid damage from other trades, construction materials, backfill or overburden. Use an appropriate Mapedrain drainage composite. The Mapedrain drainage composite should be adhered to the membrane using Mapeprime 720 W adhesive primer or an approved adhesive. *Note: Rigid insulation does not provide positive drainage to the system and that various warranties require specific protection products or materials. Contact Polyglass Technical Service for recommendations.*



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Detail requirements:

For standard installation details, follow the Mapeseal GC detail drawings. For non-standard installation instructions, contact a Polyglass Technical Service.

CORPORATE HEADQUARTERS

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Product Disclaimer:

For professional use only.

Unless otherwise incorporated into or part of a supplemental manufacturer's warranty, Polyglass warrants its product(s) against manufacturing defects in its product that directly results in leakage for a period of 1 year. Refer to safety data sheet (SDS) for specific data and handling of our products. All data furnished refers to standard production and is given in good faith within the applicable manufacturing and testing tolerances. Polyglass U.S.A., Inc., reserves the right to improve and change its products at any time without prior notice. Polyglass U.S.A., Inc. cannot be held responsible for the use of its products under conditions beyond its own control. For most current product data, detail drawings and warranty information, visit www.polyglass.us



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