



Gel - Seal Waterproofer

Product: *Gel-Seal Waterproofer (GSW)*

Gel-Seal Waterproofer Description

Gel-Seal is a chemically modified silicate solution that provides long-term waterproofing and durability benefits to concrete. It penetrates deep into concrete and reacts with free calcium and water to form a water-soluble calcium silicate gel complex in cracks, pores and capillaries. This gel creates a sub-surface barrier against the ingress of water and contaminants such as chloride ions.

Gel-Seal Advantage

Gel-Seal remains reactive upon contact with water to provide continuous healing properties to future hairline cracks. Therefore, a single application can deliver a "lifetime" (many years) of concrete waterproofing preventing freeze-thaw degradation and salt ingress. It protects the concrete and reinforcing steel. It offers major cost savings for both new infrastructure work and renovation activities. **Gel-Seal** is suitable for all types of Portland cement concrete mix designs.

- ✓ Will seal existing leaking cracks to 2.0mm
- ✓ Penetrates deep for long-lasting protection
- ✓ Seals against radon gas
- ✓ Eliminates sweating floors
- ✓ Resistant to penetration of grease, oil, acids and salts
- ✓ Meets USDA regulations

Gel-Seal Usage

Gel-Seal is used to penetrate the surface and chemically bond with the concrete. It is not a coating and it does not form a surface film. It has proven effective in:

- ✓ Parking Decks
- ✓ Airport Runways
- ✓ Bridges
- ✓ Tilt-up Construction
- ✓ Water Retaining and Distribution Structures
- ✓ Sports Arenas
- ✓ Distribution Centers
- ✓ Airports & Hangers
- ✓ Schools
- ✓ Pharmaceutical Plants
- ✓ Meat Processing Plants
- ✓ Convention Centers
- ✓ Malls
- ✓ Breweries
- ✓ Sewage Facilities
- ✓ Basement Walls and Floors
- ✓ Pre-cast and cast-in-place concrete structures

Gel-Seal Waterproofer Application

- **Gel-Seal Waterproofer** can be applied to green concrete as soon as you can walk on it, or cured concrete of any age.
- When applied to green concrete, you will get the long-term waterproofing benefits plus it helps prevent curing cracks from developing. It hardens, densifies and dust-proofs the concrete.
- When applied to cured concrete the surface must be clean, dry and dust-free.
- All curing compounds must have degraded or be removed prior to application.
- Any materials that retard penetration must be removed prior to application.
- Where segregation or voids are apparent, chip out or grind, flood with **Gel-Seal Waterproofer** then make good with a quality crack repair material.
- Good concrete practice must be followed such as adequate curing, compaction and vibration
- Do not apply where surface and ambient temperatures are below +40°F or above +90°F, or when the temperature will fall below 35°F within 24 hours after applying.

Application Rates

New Concrete: 150-250 square feet per gallon.

Old Concrete: 100-150 square feet per gallon. Areas with cracking may take two applications.

Application Method

- A.** Locate all cracks and flood with solution first, ensuring they are filled with product.
- B.** Apply the solution to the remaining area at a rate of between 100 and 250 square feet per gallon, ensuring total wetting.
- C.** Spray application with low-pressure (garden-type) sprayer recommended.
- D.** For vertical surfaces start at the bottom, working up.

PRECAUTIONS

Protect glass, aluminum, wood and painted finishes from overspray. Wear impermeable gloves and safety glasses. **DO NOT INGEST.** Wash hands prior to eating.

LIMITATIONS

Gel-Seal is not suitable for sealing working/volatile cracks as a result of structural defects or caused by mechanical damage.



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Gel-Seal Shelf Life & Storage

No known limit to shelf life in sealed containers. **Keep from freezing** and store between 40°F and 85°F. Keep container sealed and avoid prolonged exposure to direct sunlight. Always agitate drum or container before use.

Packaging	1 gallon Pails
	5 gallon Pails
	55 gallon Drums
	275 gallon Totes

Typical Properties

Diluting		Use as Supplied
Odor		None
Toxicity		None
Flammability		None
Coverage per Gallon		150-250 sf/gal
Environmental Hazards		None
Shelf Life		Infinite
Cleanup		Water & Mild Soap
Water Absorption	ASTM C-642	3.2% in 24 Hours
Depth of Penetration		6mm or more Into Concrete
Compressive Strength	ASTM C-140	3,990 psi Average
Untreated Concrete	ASTM C-140	3,415 psi Average
Water Vapor Transmission		217 grams/sq.ft. 24 hrs

Know your concrete

The **Gel-Seal** reacts with calcium in Portland cement and water. Therefore, the more Portland, the better **Gel-Seal** works. Concrete with Type C fly ash-up to 30% of cement replacement benefits from treatment with **Gel-Seal**. Repeated applications will help. There is no long-term benefit in treating concrete containing more than 5% Type F fly-ash or volcanic ash.

Performance Characteristics

- Permanently seals cracks up to 2.0 mm
- Reseals future hairline cracks up to 0.3 mm
- Reduction of chloride diffusion coefficient by 89%
- Water permeability reduced by 70%
- Increases surface hardness
- Reduces scaling in freeze-thaw environments by 89%
- Allows 84.1% moisture vapor permeability, it breathes
- Suitable for tanking applications (positive hydrostatic pressure) - tested to 400 metres
- Seals against radon gas
- Eliminates sweating floors in basements and garages
- Stops efflorescence and dusting
- Protects against concrete deterioration
- Acts as an adhesion promoter for surface applied coatings/paints (provided that the cured **Gel-Seal** surface is clean, dry and otherwise prepared according to the coating/paint manufacturer's specifications)
- Non-Toxic – suitable for potable water
- Does not change the exterior of the concrete in appearance and the surface will take color stain (acid stain)
- Protects surface coatings and adhesives from capillary rise of moisture and vapor pressure
- Fills voids in air entrained concrete (densifies)
- Neutralizes or stops Alkali Silica Reaction (ASR)

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