



## Waterproofing Engineering Technologies

This Spec Data sheet conforms to the editorial style prescribed by the Construction Specifications Institute. Manufacturer is responsible for technical accuracy.

### 1000 CONSEAL

CONSEAL is a colorless, non-toxic, non-flammable, low viscosity, spray applied liquid formulation that provides a permanent internal moisture barrier for waterproofing and preserving new and old concrete.

#### 2. Manufacturer

Waterproofing Engineering Technologies  
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#### 3. Product Description

CONSEAL 1000 provides a unique barrier for waterproofing concrete and dense cementitious masonry products.

Whereas most other waterproofing products develop only a surface coating, CONSEAL is designed to penetrate deeply (up to 8 inches) and become an integral part of the concrete. CONSEAL is a water based, internal waterproofing system which contains the same inorganics present in concrete.

A proprietary wetting agent composed of sixteen enzymes remarkably reduces the liquid's surface tension, which enables the CONSEAL to penetrate deeply into the small pore diameters. This filling of all the inter-connected pores and fissures stops liquid transmission by the formation of a gel within the pores and interstitial spaces within the first 72 hours after the CONSEAL application. This gel swells in the presence of moisture and prevents the passage of water and other liquids under hydrostatic pressure. When the hydrostatic load is removed, the gel shrinks sufficiently to allow the concrete to breathe.

#### BASIC USES:

CONSEAL preserves new or old concrete. CONSEAL hardens new concrete and retards dusting without altering the surface appearance, texture, or bonding characteristics. The occlusive seal formed by CONSEAL limits deterioration of concrete and dense cementitious masonry by resisting the penetration of acids, alkalis, oils and salts. CONSEAL is formulated to perform against below grade hydrostatic pressure and is also excellent as an on grade moisture barrier.

#### ADVANTAGES:

- hardens concrete, minimizing surface dusting, pitting, spalling and hairline cracking
- inhibits water seepage and saponification
- resists acid, alkali and salt and oil attack
- seals against seepage below grade (i.e. from hydrostatic head)
- stops capillary action

- aids in curing new concrete uniformly, resisting spot drying and hairline shrinkage cracking – can be applied immediately after finishing
- ejects grease and oils which have penetrated concrete. CONSEAL 1010 emulsifies such materials and floats them to the surface – resists such further penetration
- prepares concrete surfaces for subsequent applications of paint, stains or adhesives specifically formulated for use on concrete surfaces – as both concrete and CONSEAL are essentially breathable materials, a test area should be tried before proceeding with any large areas of seamless materials – moisture testing is often used in this determination
- promotes greater paint durability by helping to resist peeling, cracking or crumbling – increases bonding strength of latex and poly-vinyl paints

#### LIMITATIONS:

- CONSEAL is formulated primarily for concrete and other substrates containing calcium carbonate and lime and does not effectively seal asphalt, metal or wood, or clay products
- CONSEAL will not penetrate acrylic or nonporous rubber based paints
- CONSEAL must be applied at full strength to attain the desired results

#### COMPOSITION:

CONSEAL is a non-toxic, (water based) blend of inorganics which react with water and natural by-products in the formation of concrete to form an internal system of suspended solids. These suspended solids extend throughout the concrete filling all the capillaries, thereby creating a permanent moisture barrier. CONSEAL contains no organic materials or inorganic heavy metals. CONSEAL is neither flammable or explosive and does not emit any harmful fumes.

#### TYPES:

CONSEAL 1000 for normal applications

CONSEAL 1010 for applications on concrete surfaces permeated with oil, grease or acid

#### SIZES:

5 Gallon Plastic Pails

55 Gallon Steel or Plastic Drums

4 Gallons per Case

#### 4. TECHNICAL DATA

##### Physical Properties

|                  |                     |
|------------------|---------------------|
| Appearance       | Colorless           |
| Odor             | Negligible          |
| Toxicity         | None                |
| Flash Point      | None                |
| Resistivity      | 50 Ohms             |
| pH               | 12.1 pH Scale Units |
| Total Solids     | 10.1 %              |
| Specific Gravity | 1.075               |

##### Compressive Strength:

CONSEAL significantly increases the compressive strength of concrete because the silicate constituent of the material reacts with the calcium hydroxide (present in all concrete) to form calcium silicate hydrate.

##### Absorption:

The chemical reaction between CONSEAL and the free lime and alkali within the concrete seals the small pores and hairline cracks to impede the absorption of moisture.

##### Stain Resistance:

Treated concrete is noticeably more resistant to staining and is more easily cleaned than untreated concrete.

##### Dusting Resistance:

Concrete treated with CONSEAL is significantly more resistant to dusting as compared to untreated control samples.

##### Freeze Thaw Resistance:

CONSEAL imparts an improved resistance to freeze-thaw damage under test conditions.

##### Resistance to Salt Attack:

CONSEAL application to concrete imparts resistance to salt attack (5% NaCl solution) under freeze-thaw conditions.

##### Resistance to Chemicals:

Concrete treated with CONSEAL develops a high resistance to chemical attack. This resistance is imparted by the highly chemical resistant inorganic solids which permeate the concrete and form a protective coating around the individual cement particles.

Concrete treated with CONSEAL is highly resistant to oils, grease, petroleum and non-petroleum based hydrocarbon solvents, caustic alkalis and most of the organic and inorganic acids.

##### Approvals:

USDA - chemically acceptable as a coating for application to structural surfaces where there is a possibility of incidental food contact in establishments operating under the Federal Meat and Poultry Products Inspection Program.

CONSEAL has been approved for use in all animal holding and shelter facilities by The Regulatory Enforcement and Animal Care (REAC) division of the U.S. Dept. of Agriculture.

#### 5. INSTALLATION

##### Preparatory Work:

No preparatory work is generally required. However, if the concrete surface is coated with heavy wax, thick grease, recently applied surface sealer, rubber or acrylic paint or other impervious material, remove such materials so that the CONSEAL can reach the surface of the concrete where it will be allowed to penetrate into the concrete. Accidental over application will not discolor the surface.

##### Method of Application:

1. Dampen surface to be treated (do not saturate) using a fine mist water spray.
2. Saturate the surface thoroughly with CONSEAL at an approximate rate of 100 – 150 square feet per gallon, depending upon porosity of the concrete.

Low pressure spray equipment, such as a hand pumped garden type sprayer works well for medium sized areas. For large areas, airless spray equipment is very efficient. Small areas can be effectively treated using a spray bottle.

Brushes or rollers are not recommended because of the low viscosity of the CONSEAL.

Do not allow the CONSEAL to pond or puddle, as a white residue will likely form on the surface of the concrete. Move the excess material from the low spots on the floor to the high spots with a squeegee, mop or broom. Any remaining material should be picked up with a wet vac or mop.

The time for additional applications can be judged by observing the time it takes for the CONSEAL to soak into the concrete. If the CONSEAL soaks in quickly, generally less than fifteen minutes after application, additional material should be applied.

3. **IMPORTANT:** Approximately 3 hours after application of the CONSEAL, water dampen the treated surface using a fine water spray mist. **CAUTION:** Do not flush with water as some of the CONSEAL still on the surface may be washed away by this action.
4. 24 hours after application, flush or mop the surface thoroughly with water. Surface should be kept continually damp for 48 hours
5. Painted surfaces: CONSEAL will penetrate through most oil and water based paints. Generally, it will not effect the existing color; however, a small area should first be tested before applying CONSEAL to any expansive areas.
6. CONSEAL will not penetrate latex, polyvinyl or acrylic based paints.

Unpainted surfaces: Generally, no surface preparation is necessary. Before painting over CONSEAL treated areas, the surfaces should be flushed with clear water until the surface no longer exhibits leaching of alkali or foreign matter.

7. For surfaces such as basement and outside walls, follow standard procedures as described above. CONSEAL will seal against hydrostatic pressure; however, flowing water must be stopped before application.
8. Oil, grease or acid conditions: Preliminary cleaning of the surface is necessary before CONSEAL is applied. Heavy deposits may require scraping, followed by thorough cleaning with a commercial degreaser. After the surface has been cleaned, apply CONSEAL 1010. Flush the area with cold water when the CONSEAL 1010 has penetrated and the area feels tacky or slippery. A floor brush or squeegee will help float oils and grease off when flushing. Deep stains will not be removed entirely at the time of treatment, but will disappear progressively as the CONSEAL penetrates, emulsifies and ejects the oil or grease.
9. Curing new concrete: Apply CONSEAL to the surface as soon as the concrete finishing operations have been completed, or when the forms have been removed, saturating the surface thoroughly. Concrete will cure slowly, producing a hardened waterproof surface. CONSEAL is excellent in hot or windy weather, since it promotes uniform curing, increases density, resists hairline shrinkage cracking and stops surface dusting.

**Precautions:**

CONSEAL should not be allowed to remain on glass or aluminum

In the event of contact, wipe off immediately with a wet cloth or sponge.

CONSEAL should not be applied to glazed floor or wall tile, or glazed or hard fired brick where the glaze will prevent the penetration of the material. However, CONSEAL may be applied over these materials if the intent is to seal the grout joints. In such cases, after the CONSEAL has sufficiently soaked into the grout, remove all excess material from the surface with a wet vac, squeegee or mop. This will greatly minimize the possibility of a white deposit or film from forming on the tile or brick. When in doubt, apply CONSEAL to a small test area.

CONSEAL is not recommended for use on porous brick, pavers or tile as there is not sufficient alkali (lime) in these materials for the CONSEAL to react with. In most cases, white discoloration will occur on such surfaces.

CONSEAL should not be applied to masonry structures having a mortar or grout containing a latex binder.

CONSEAL should not be applied or stored at freezing temperatures. 45 degree minimum surface temperature.

If freezing occurs during storage, agitate the thawed material thoroughly to assure uniform solution.

During outside applications, care should be taken to protect vegetation and adjacent areas from direct spray or overspray.

## 6. AVAILABILITY

CONSEAL is available through local distributors and dealers, or may be ordered directly from the manufacturer if a supplier is not available in your area.

## 7. GUARANTEE

The information and data contained herein are believed to be accurate and reliable; however, it is the user's responsibility to determine suitability of use. Since Waterproofing Engineering Technologies cannot know all of the uses to which its products may be put, or the conditions of use, it makes no warranty concerning the fitness or suitability of its products for any particular purpose.

The user should thoroughly test any proposed use of our products and independently conclude satisfactory performance for the given application. Likewise, if the manner in which our products are used requires agency or government approval, user must obtain it.

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## 8. TECHNICAL SERVICES

Waterproofing Engineering Technologies maintains a staff of technical consultants, available to assist with any application. Our research and Development Engineering Department is continually working to improve existing products and methods as well as developing new products.

## 9. FILING SYSTEMS

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