PRODUCT DATA SHEET: **ENGINNERED CONCRETE**

S-TECH 100C™

100% SILANE IMPREGNATING SEALER

OPTIMAL PROTECTION FOR ENGINEERED CONCRETE AGAINST WATER AND CHLORIDE ION INGRESS.

S-TECH 100C™ is a fully breathable, 100% octyl silane which penetrates deeply into engineered concrete and forms permanent chemical bonds inside the pores to provide optimal, long lasting water repellence and protection against the ingress of water and dissolved chloride ions.

It is designed to maintain the condition and maximize the life of concrete structures against common forms of damage caused by the ingress of water and salts, including: Efflorescence and leaching of water soluble minerals, freeze-thaw / salt spalling and picture framing. It also keeps surfaces looking good for longer and makes them easier to clean and maintain.

TYPICAL APPLICATIONS:

High rise concrete structures, parking garages, highways, overpasses, bridges, wharfs, jetties.

Especially important for the protection of concrete structures in a salt water or freeze-thaw environment or where de-icing salts are used.

SUITABLE SURFACES:

Engineered / structural / poured concrete

WARRANTY:

A 30 year performance warranty is available if product is applied by a level 4 Accredited Applicator at the optimal application rate (see section on Total Application Rates), according to our written instructions and guidelines and samples are provided to us for testing. Industry professionals can contact their local Dry-Treat representative or email info@drytreat.com to enquire about Accredited Applicator training and certification.

30 YEAR WARRANTY

BENEFITS:

- Penetrates deeply, and forms full covalent bonds inside the pores of the concrete for superior long term water repellence.
- Premium protection against freeze-thaw / salt water spalling, efflorescence, picture framing and other common damage caused by water and chloride ion ingress
- A 30 year performance warranty is available – see Warranty section for details.
- VOC <329g/L - meets SCAQMD rule 1113 for reactive penetrating sealers, within 5 miles of the ocean or above 4000ft on reinforced concrete structures.
- High resistance to alkaline (high pH) environments. Concrete is highly alkaline / base and can severely shorten the life of other technologies.
- Able to seal hairline cracks up to 0.3 mm (0.012 in.)
- Retards reinforcement corrosion (even in carbonated concrete)
- Reduces alkali aggregate reactions
- Non film forming so it cannot flake or peel and is resistant to UV
- Studies have demonstrated that high performance silanes can extend the service life of reinforced concrete structures by over 100 years
- Dry-Treat only uses silanes which produce alcohol. Dry-Treat sealer do NOT contain methoxy silanes which emit methanol and can cause blindness / death

DRYTREAT
Excellence in sealing products™

HOW TO USE:

1. **ALWAYS TEST PRODUCT ON A SMALL AREA FIRST and allow a 24 hour cure time to determine the ease of application and desired results.**
2. Wear suitable solvent-resistant gloves, protective clothing, safety goggles and an organic vapor respirator during application
3. Ensure surfaces to be treated are dry, clean and free of residues
4. Surface temperature should be 40 - 95°F / 5 - 35°C
5. Product is not to be diluted / thinned
6. When applying to a building façade or within reach of other surfaces, mask or otherwise protect these other surfaces such as window frames from overspray. If they receive overspray, clean immediately with alcohol, methylated spirits or acetone.
7. Generously apply the product using a low pressure sprayer with a fan spray nozzle working from the lowest sections upwards.
8. Ideal application rate to is 1 gallon per 136 sq. ft. or 1 liter per 3.34 sq. m. per coat, but will vary with surface porosity and depth of penetration required..
9. For additional protection a second coat can be applied a minimum of 6 hours after the first coat
10. Clean equipment with methylated spirits, alcohol or acetone

Warning: Sealer will not prevent acid etching or physical wear of the surface and may cause some darkening

ADVANCED APPLICATION GUIDELINES:

- **Limitations:**
  - S-TECH 100C™ should never be diluted
  - S-TECH 100C™ should only be used on exposed concrete surfaces which are not subjected to constant static water pressure
  - Not intended for below-grade waterproofing or for use as a waterproof membrane.
- **Do not dilute or apply to a wet surface:** Silanes are reactive. This means they react chemically to form permanent covalent bonds within the treated material. If the silane is made to react before it finds suitable sites inside the concrete, then it cannot bond inside the pores of the concrete and performance and lifespan can be affected. For this reason it is important never to dilute the product or apply it to concrete which is wet (on the surface or inside the material).
- **Testing and cure time:** It can take up to 4 weeks for all of the silane molecules to migrate and find suitable sites to bond inside the pores. As more silane bonds inside the treated material, performance improves. It is recommended to let treated surfaces cure in a well ventilated area for at least 3 weeks before testing for penetration or water repellence.

PACK SIZE

- USA and Asia Pacific – 5 gallon / 18.9 liter; 54 gallon / 204.5 liters; 250 gallon / 946 liter - special order
- Europe – 5 Gallon (18.9Litre); 54 and 250 gallon - special order.

YIELD

68 – 240 sq. ft. per gallon (1.67 – 6 sq. m. per liter).

SHELF LIFE & STORAGE:

- Use product within 12 months of purchase.
- Keep container tightly sealed, in a well-ventilated place, at 36 - 85°F or 2 - 30°C
- Product is NOT freeze-thaw stable.

TECHNICAL DATA

- Active Content: <99% n-Octyltriethoxysilane. Complies with UK Highways Agency BD 43/03 "The Impregnation of Reinforced and Pre-stressed Concrete Highway Structures Using Hydrophobic Pore-Lining Impregnants" and BS EN 1504- 2:2004 "Products and Systems for the Protection and Repair of Concrete Structures"
- Specific Gravity: 0.88
- Color: Clear colorless liquid
- Weight: 7.34 lbs / gallon; 0.88 kg / liter
- VOCs: <329 g/liter

COUNTRY OF MANUFACTURE

USA

TEST RESULTS

NCHRP244 series ii, immersion of concrete cube test

(Conducted on very high density 69 MPa structural concrete)

- Reduction in absorption of water after 72 hour immersion: >95%
- Reduction in absorption of NaCl solution after 72 hour immersion: >97%

TYPICAL PENETRATION

5 - 10mm depending on application rate and concrete porosity.

- **Applying the right amount of product consistently on a large area:**
  - It is recommended to measure out an area before starting application and a suitable amount of product to get a visual gauge and feel for how much product to roll or spray for each coat.

- At regular intervals measure the area you have sealed and the amount of product used to check that you are consistently applying the desired amount of product.
- When using a second coat, apply perpendicular to the first coat, to ensure all areas of the surfaces receive a consistent amount of product.

- **Cleanup of equipment / spills:** Ensure you have a good supply of alcohol, methylated spirits or acetone and clean white absorbent cloths, paper towels to clean your equipment and any overspray. If using solvent to clean overspray, take care not to damage any paint, coatings or other vulnerable surfaces.

TOTAL APPLICATION RATES

- 68 – 240 sq. ft. per gallon (1.67 – 6 sq. m. per liter).
- Optimal application rate: For marine / freeze-thaw environments or where de-icing salts are used, the recommended application rate is 68 sq. ft. per gallon (1.67 sq. m. per liter).
- Higher application rates give deeper penetration and a higher concentration of silane inside the concrete which gives better and longer lasting performance.

TRANSPORT

Not regulated for transport of dangerous goods:

DOT (Road), IMDG (Ocean), IATA (Air) Transport

WARNING

Combustible liquid. Causes skin irritation. Harmful to aquatic life. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment. Wear protective gloves / protective clothing/ eye protection/face protection. Take off contaminated clothing. In case of fire: Use alcohol resistant foam or normal protein foam for extinction. IF ON SKIN: Wash with plenty of water and soap. If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse. Store in a well-ventilated place. Keep cool. Dispose of contents / container in accordance with local regulations.

FIRST AID:

- If swallowed, give a glass of water and contact a physician.
- If skin contact occurs remove contaminated clothing and wash skin thoroughly. If irritation persists, contact a physician.
- If in eyes, hold open, flood with water for at least 15 minutes and contact a physician.
- If vapors are inhaled, relocate to fresh air. If symptoms persist contact a physician

ACCIDENTS

- Spillage – Take up mechanically or with absorbent material such as sand, earth or vermiculite.
- Remove all ignition sources

PRECAUTIONS

- Do not take internally.
- Apply when surface temperature is between 5 and 35 C° (40 to 95 °F).
- Avoid moisture contact with the surface for 6 hours after application.
- Protect surrounding areas from over spray .
- Keep away from drains, plants, water and soil.
- Use only in well-ventilated areas.
- Use a positive pressure respirator if ventilation is inadequate.
- Wear suitable solvent-resistant gloves, protective clothing, safety goggles and an organic vapor respirator during application.
- Avoid applying in windy conditions.
- Wash hands thoroughly.