



durasil Silane

Water repellent treatment for highly alkaline concrete or to alter the polarity of surfaces

DESCRIPTION

durasil Silane is a pure undiluted N-octyltriethoxy silane for treating highly alkaline concrete to provide water repellency by reacting with the cementitious substrate. This material reacts with moisture in the air and substrate in the presence of an alkaline or acidic environment producing hydroxy groups that bond with the substrate forming a hydrophobic surface inhibiting water absorption. Alkaline environments catalyze the reaction and speed up the formation of the hydrophobic properties. More protection is provided when applied to highly alkaline surfaces, new concrete less than one year old. The degree of protection is less effective on old concrete or neutral substrates. (See **durasil SH** for old concrete) When diluted with an appropriate solvent can be used in the formulation of water repellent products.

USES

durasil Silane can be used in the formulation of water repellent products. The product produces a hydrophobic treatment that inhibits water absorption. The product can be used in the following applications:

- Commercial buildings
- Parking decks/garages
- Highways
- Concrete structures
- Bridge structures

FEATURES AND BENEFITS

- Small molecular structure for deep penetration into the concrete surfaces

- Can improve dispersion of polar fillers in covalent matrices
- Surface modification can improve compatibility to non-polar substrates
- Prevents carbon and chloride ingress
- Reduces corrosion by inhibiting water absorption
- Water vapour permeable, breathable
- Ready to use
- Long lasting protection
- Excellent resistance to weathering
- Colourless
- Preserves natural colour and texture of treated surfaces

SURFACE PREPARATION

All surfaces must be clean, dry, free of laitance, loose particles and mechanically sound. Any existing grease and grime stains have to be removed by means of high pressure water jetting, degreasing and light abrasive blasting. Clean and leave the surface to dry out completely.

PHYSICAL PROPERTIES

Colour	Clear
Purity	98 %
Specific gravity @ 25 °C	0.875
Flash point	> 63 °C
Density	7.3 g/ml
VOC content	329 g/l
Shelf life	24 Months
Coverage	± 5 m ² /litre/coat
Thinner	Isopropanol or ethanol

APPLICATION

Methods of application include airless sprayer, roller or brush. When a brush or roller is used, repeated applications should be made until the surface remains moist for a few minutes. If an airless sprayer is used, application should continue until the substrate is thoroughly saturated. Sprayers should be fitted with solvent resistant hoses and gaskets. A test application is necessary on each surface to be treated to ensure compatibility and the desired water repellent result.

Surfaces should be free of standing water, dirt, dust, oils and other contaminants. Formulated **durasil Silane** may be applied to damp surfaces although dry surfaces are preferred to achieve maximum penetration into the substrate. Any plants or shrubs, especially windows, vehicles, etc. should be protected from exposure to the treatment. Any material that should not be exposed to solvents should also be protected.

CAUTIONARY NOTE

When using any solvent, always provide adequate ventilation. Follow the handling instructions on the solvent container label.

COVERAGE

± 5m²/litre/coat

Note: Coverage will vary due to wastage factors and the variation of substrate profiles and permeability. It is therefore important to test the substrate to determine an approximate usage.



CLEANING

Tools and equipment should be cleaned with **thinners no 3** immediately after use.

Note: All tools and equipment must be dry and moisture free. Contamination will impair the products performance. ie ensure the spray equipment is clean and dry before filling the equipment with **durasil Silane**.

MODEL SPECIFICATION

The silane water repellent treatment for structural concrete will be **durasil Silane** used to assist in formulating penetrating treatments that provide water repellency supplied by **a.b.e. Construction Chemicals**.

The **durasil Silane** will be applied in accordance with the specifications of **a.b.e. Construction Chemicals**.

PACKAGING

durasil Silane is supplied in 25 litre and 200 litre metal containers.

HANDLING & STORAGE

When stored at or below 25°C in the original unopened containers, **durasil Silane** has a usable shelf life of 24 months from the date of manufacture. In more extreme conditions this period might be shortened. Keep away from open flames.

HEALTH & SAFETY

durasil Silane is combustible and releases ethanol when curing. Take safety precautions at all times. Do not store near sparks or open flames. Do not smoke in the vicinity of application. Use in a well ventilated area and always wear protective clothing. If material is splashed in the eye, wash with copious quantities of clean water seek medical attention.

IMPORTANT NOTE

This data sheet is issued as a guide to the use of the product(s) concerned. Whilst **a.b.e. Construction Chemicals** endeavours to ensure that any advice, recommendation, specification or information is accurate and correct, the company cannot - because **a.b.e.** has no direct or continuous control over where and how **a.b.e.** products are applied - accept any liability either directly or indirectly arising from the use of **a.b.e.** products, whether or not in accordance with any advice, specification, recommendation, or information given by the company.

Further information

Where other products are to be used in conjunction with this material, the relevant technical data sheets should be consulted to determine total requirements. **a.b.e. Construction Chemicals Limited** has a wealth of technical and practical experience built up over years in the company's pursuit of excellence in building and construction technology.