

Siloxane Impregnation for Concrete & Masonry Water Repellents

**Type: Water Base, Liquid Form Siloxane/Silane
100% Environment System**

Characteristics

Top Gard WR 2100, is a silicone concentrate that is on silane /siloxane and is water base, serve as high-quality general purposes water repellents for impregnating and priming mineral and highly alkaline substrates.

Features

- * Excellent Depth of Penetration & Stop Diffusion of Vapor
- * Permeable to Water Vapor so does not affect the Breathing Behavior of Mineral Substrate
- * Improvement in Adhesion of the Coating
- * Marine Environment
- * Excellent Protect of Chloride Attack
- * Excellent Protect of Freeze Thaw Cycles
- * Excellent Protect of High Alkaline Resistance
- * Tack-Free Drying
- * Effective even on Damp Substrates
- * Water Repellency Develops Fast

After application **Top Gard WR 2100** reacts with the atmosphere moisture or pore water in the substrate, thereby generating the active ingredient while liberating alcohol. The active ingredient greatly lowers the water absorbency of the substrate. Since neither pores nor capillaries are clogged, the substrate retains a very high degree of water vapor permeability.

Uses

Top Gard WR 2100 is suitable for imparting water repellency to absorbent, porous, mineral construction materials,

- * All kinds of concrete for Buildings, Reservoirs, Jetties & Bridges
- * Brickwork Surfaces
- * Mineral-based natural and artificial stone
- * Aerated concrete
- * Sand-lime brickwork
- * Cement fiberboards
- * Mineral paints
- * Cement sand or mineral plasters

Top Gard WR 2100 is also suitable as primer for exterior paints.

Top Gard WR 2100 is not suitable for rendering gypsum water repellent.

Surface Preparation

The surface to be applied with **Top Gard WR 2100** shall be free of dust and dirt. Lime efflorescence, salt and paint remnants, etc must be removed, preferably by high pressure water-jet, hot water or pressurized steam. Detergent cleaning is not recommended as if detergents are not removed completely, they can adversely affect the water repellency effect. Acid or alkali cleaning is also not recommended because of the risk of damaging the mortar joint or formation of salts which would lead to efflorescence.

The best impregnation effect is achieved on a dry, very absorbent surface, although **Top Gard WR 2100** can also be successfully employed on a slightly damp surfaces (moisture content should not be more than 6% by volume).

If there are joints to be filled on concrete surfaces which have been impregnated with **Top Gard WR 2100** for example precast concrete elements, adhesion to these penetrable surfaces will not be impaired. The relevant primers must always be used, followed on with suitable sealants, for example Flex Joint V or Flex Joint H.

Technical Specification (2 Grades)

Product Data		Top Gard WR 2100 WB	Top Gard WR 2100 WJ
Appearance		Colorless	Colorless
Silane / siloxane content ,approx	(%)	7.12	11.12
Specific Gravity at 25 °C, approx	g/cm ³	1.00 (±0.01)	1.00 (±0.01)
Viscosity at 25°C, approx	(mm ² /s)	5 (±0.2)	5 (±0.2)
Flash point, (DIN EN ISO 2719) approx	(°C)	200	200
Reduction of water absorption	(%)	55.50	75.80
Water absorption	(%)	<0.20	<0.14
Reduction of chloride ion content	(%)	63.20 (no corrosion)	85.40 (no corrosion)
Water vapor transmission	(%)	>89.90	>123.30
Penetration Depth (Concrete G 30)	(mm)	>1.01 (±0.5)	>2.00(±0.3)
Salt Scaling (Concrete G 30)	(g/m ²)	12.2 (±0.3)	12.2 (±0.1)

Consumption of Material / Coverage

Concrete	(liter/m ²)	0.15 – 0.25
Cement Plaster	(liter/m ²)	0.25 – 0.50
Sand-Lime or Clay Brick	(liter/m ²)	0.40 – 0.70
Aerated Concrete	(liter/m ²)	0.50 – 0.75
Cement Fiberboard	(liter/m ²)	0.10 – 0.30
Natural Stone	(liter/m ²)	0.05 – 0.75

These figures are intended as a guide and should not be used in preparing specifications.

Packaging

Top Grad WR 2100 WB 20 liter Pail, 5 liter Tin or 1 Liter Tin
Top Grad WR 2100 WJ 20 liter Pail, 5 liter Tin or 1 Liter Tin

Safety Information

Detailed safety information is contained in each material safety data safety sheet, which can be obtained from our sales offices

Storage

Top Gard WR 2100 has a shelf life of at least 12 months when stored between 0 °C and 30 °C in the lightly closed original container. The containers must be protected against direct sunlight. The “Best use before end” date of each batch appears on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Handling Precautions

Wash off any silicone concentrate on the skin with plenty of water before it dries. During mixing and application ensure adequate ventilation since the silicone component contains active ingredient which is volatile and may cause eye watering in confined spaces. Avoid generation of airborne dust during mixing. Top Gard WR 2100 silicone contains more than 10% Silane/siloxane and, therefore, in line with current legislation, is classified as irritating to eyes and skin. For this reason the following precautions should be observed: -

Avoid contact with the skin and eyes; in case of contact with the eyes, rinse immediately with plenty of water and seek medical advice; wear suitable gloves and keep the product out of the reach of children.

The General Term & Conditions

All recommendations for use of our product, whether given by us in writing, verbally, or to be implied from the results of tests carried out by us are based on the current state of our knowledge. Notwithstanding any such recommendations the Buyer shall remain responsible for satisfying himself that the products as supplied by us are suitable for this intended process or purpose. Since we cannot control the application, use or processing of the products, we cannot accept responsibility therefore. The Buyer shall ensure that the intended use of the products will not infringe any third party's intellectual property rights. We warrant that our products are free from defects in accordance with and subject to our general conditions of supply.

The above mentioned details Specified key data are individually checked throughout, guarantee, and included in the certificates of Analysis (CoAs). & Typical key data are spot checked, the value are typical for the product and are indicated for information only. The values are not guaranteed or included in the CoAs.

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