

# ISO STONE 1090

## Product Data Sheet (TDS)

### DESCRIPTION

ISO STONE 1090 is one-part reactive water repellent impregnation, colourless liquid based on active silanes & siloxanes mixture.

ISO STONE 1090 penetrates well into the open pores of the substrate, providing durable water repellency, while still allowing water vapour diffusion in both directions to protect concrete structures, renders, face bricks, exposed concrete blocks, natural and artificial stone, etc.

ISO STONE 1090 complies with the requirements of EN 1504-2 for hydrophobic Impregnations (penetration depth class I).

ISO STONE 1090 is suitable for use in hot and tropical climatic conditions.



### PRODUCT & TECHNICAL DATA

Composition	Silanes / Siloxanes
Appearance / Colour	Colourless liquid
Mix Density	1.03 g/cm <sup>3</sup>
Dry solids content	approx. 5%
Brookfield viscosity (mPa•s)	approx. 10 (shaft 1 - 100 revs)
Surface drying time	1-2 hours
Ambient Air Temperature	(+5 °C) – (+35 °C)
Substrate Temperature	(+5 °C) – (+35 °C)
Capillary action water absorption coefficient	W24 (EN 1062-3) [kg/(m <sup>2</sup> •h0.5)] No vertical slip ≤ 0.5 mm
Facing bricks	0.04 (15.60 saturation)
Conventional render	0.05 (10.40 saturation)
Tuff stone	0.07 (6.80 saturation)
Cementitious smoothing layers	0.38 (15.60 saturation)

### USES

- ISO STONE 1090 is used as water repellent and colourless protective surface treatment on absorbent exposed materials such as concrete structures, renders, face bricks, exposed concrete blocks, natural and artificial stone, etc
- ISO STONE 1090 is used as water-repellent impregnation (hydrophobic treatment) for absorbent substrates such as concrete in civil engineering or building concrete structures.
- ISO STONE 1090 Keeping external walls clean of sticking dust and other dirt particles.

### ADVANTAGES

- Reduction of capillary water absorption.
- Reduces dirt penetration into the pores.
- Improves thermal insulation.
- Higher durability and resistance than conventional silicone-based treatments.
- Does usually not change the appearance of the substrate.
- Does not act as a vapour barrier.

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### COVERAGE

The consumption rate is heavily influenced by the absorbency of the substrate, and varies approximately from 0.20 -1 kg/m<sup>2</sup>.

Listed below are several materials with their typical consumption rates:

- facing bricks: 0.50-0.75 kg/m<sup>2</sup>.
- conventional render: 0.50-0.80 kg/m<sup>2</sup>.
- tuff stone: 0.50-1.00 kg/m<sup>2</sup>.
- cementitious smoothing layers: 0.20-0.40 kg/m<sup>2</sup>.
- marble: 0.20-0.50 kg/m<sup>2</sup>.

### APPLICATION PROCEDURE

#### Surface preparation

Substrate surface must be free from dirt, dust, grease, oil, paint, salt laitance, moss and weeds because that might prevent ISO STONE 1090 from penetrating deeply.

Cracks in concrete of more than 200 µm must be repaired prior to application of the hydrophobic treatment.

For old surfaces, the choice of cleaning system will depend on the kind of dirt involved.

Washing with cold water is generally sufficient. Cleaning is best achieved by brushing with suitable detergents or by light blastcleaning or steam cleaning etc.

Best results are obtained on dry, very absorbent substrates.

ISO STONE 1090 should only be applied to dry surfaces.

If water is present, it is unable to penetrate deep down into substrate.

#### Mixing

ISO STONE 1090 is ready to use and should not be diluted with water.

#### Application

ISO STONE 1090 is applied by using low pressure spray by back-pack spray gun for large surfaces or brush or roller, working from bottom up taking care not to let the product run or form layers of the product during application.

Apply subsequent coats “wet on wet” until the surface is completely saturated.

Go over the surface with a sponge float if necessary while the product is still wet.

#### Curing

ISO STONE 1090 does not require any special curing but must be protected from rain for at least 3 hours at +20 °C.

#### Recommendations

- ISO STONE 1090 is not suitable to use with these cases:
  - \* Horizontal surfaces (terraces).
  - \* Basements, water tanks.
  - \* Walls subject to rising damp carrying salts.
  - \* Lift wells and areas subject to water under pressure.
  - \* Gypsum surfaces;
  - \* Synthetic plasters and surfaces decorated with synthetic paint.
- \* Carry out a preliminary test to ensure no color changes take place on the substrate when ISO STONE 1090 is to be used on natural stones, colored renders or on other types of substrates that show no uniform absorbency.
- Minimum age of concrete or mortar: at least 4 weeks.
- Do not overcoated with limewash or cement paint.
- Do not apply ISO STONE 1090 on damp substrates or on substrates that are not well cured.
- Do not apply ISO STONE 1090 if the temperature is lower than +5°C or higher than +35°C (the surface should not be exposed to direct sunlight).
- Do not apply ISO STONE 1090 if the level of humidity is higher than 85%.
- Do not apply ISO STONE 1090 if it is about to rain or in windy weather.

## CLEANING

Clean all the tools with water immediately after use.

Hardened materials can be removed mechanically only.

## PACKING

ISO STONE 1090 is supplied in drums :

- 20 kg.
- 5 kg.

## SHELF LIFE

Shelf life is up to 12 months from production date when stored as per recommendations.

## STORAGE

Product must be stored in original unopened packaging, under cover, out of direct sunlight and protect from extreme temperatures.

In tropical climates the product must be stored in air-conditioned environment.

## HEALTH AND SAFETY

As with all construction chemical product, caution should be always be exercised.

Protective clothing such as gloves and goggles should be worn.

Treat any splashes to the skin or eyes with fresh water immediately.

Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.

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E: [info@isobitiraq.com](mailto:info@isobitiraq.com).

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