



Dekguard® S100

Aliphatic acrylate based protective and decorative coating for concrete

Uses

To protect atmospherically exposed reinforced concrete structures from attack by acid gases, chloride ions, sulphates, oxygen and water. The product is also suitable to protect other cementitious substrates. Dekguard S100 is suitable for use on all types of structures, especially those in aggressive marine and coastal environments. Dekguard S100 is a component of Fosroc's Renderoc system of concrete reinstatement.

Advantages

- Excellent barrier to carbon dioxide, chloride ions, sulphates, oxygen and water
- Allows water vapour to escape from the structure UV resistant aliphatic acrylate gives exceptional resistance to the effects of long term weathering.
- Durable in all climatic conditions.
- Selected range of decorative colours
- Ease of application - single pack - no mixing of separate components.

Description

Dekguard S100 system comprises of a single component pigmented coating ready to use at site.

Technical support

The company provides a technical advisory service supported by a team of specialists in the field.

Design criteria

The coating should be applied in two coats at a dry film thickness of not less than 100 microns. To achieve the correct protective properties, Dekguard S100 coating must be applied on to the substrate at the coverage rates recommended.

Properties

	Dekguard S100	Control concrete
Percentage water absorption after 24 hours	Nil.	1.02

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Permeability as per BS:1881 (ml/m²/s) after

2 hours	Nil.	-
6 hours	Nil	9.0
24 hours	Nil	30.
48 hours	10	52.8

Depth of carbonation in mm (Accelerated carbonation test)

2 hours	Nil	1.0
4 hours	Nil	3.0
6 hours	Nil	5.0
12 hours	Nil	7.0
24 hours	Nil	8.0

Protective / decorative surface coating

The protective coating shall comprise Dekguard S100, a single component aliphatic acrylate coating. The total dry film thickness of the coating shall be not less than 100 microns and shall be capable of providing carbon dioxide diffusion resistance and the depth of carbonation shall be Nil. when tested at 24 hours by the accelerated carbonation test. The permeability shall be Nil when tested at 24 hours as per BS 1881.

Application instructions

Preparation

All surfaces should be dry and free from contamination such as oil, grease, loose particles, decayed matter, moss, algae growth, laitance, and all traces of mould release oils and curing compounds. This is best achieved by lightly grit / sand blasting the surface. Where moss, algae or similar growths have occurred, treatment with a proprietary biocide should be carried out after the grit blasting process.

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Note : It is not necessary to remove Fosroc's Nitobond AR curing membrane prior to the application of Dekguard S100 provided the adhesion to the substrate is excellent.

Where application over existing sound coatings is required, trials should be conducted to ensure compatibility and retention of the bond between the underlying coating and the substrate. For further advice, consult Fosroc.

It is essential to produce an unbroken coating of Dekguard S100. To ensure this is achieved, surfaces containing blow holes or similar areas of pitting should first be filled using a suitable cementitious fairing coat (for further details, refer to Fosroc).

The cementitious fairing coat should be allowed to cure for about 48 hours depending on ambient conditions before the application of Dekguard S100.

Application

In order to obtain the protective properties of the Dekguard S100, it is important that the correct rates of application and over coating time are observed.

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Number of coat(s)	2
Theoretical Application rate	4 -5 m ² / litre/ coat @ 125 microns WFT
Total dry film thickness	100 microns
Over coating time	
@ 20°C	6 hours
@ 30°C	5 hours

Application should not commence if the temperature of the substrate is below 10°C.

Any areas of glass should be masked. Plants, grass, joint sealants, asphalt and bitumen - painted areas should be protected during application.

All prepared substrates should be treated with two coats of Dekguard S100. The material should be stirred thoroughly

before use. The first coat should be applied to all areas by the use of suitable airless spray, brushes or rollers to achieve a uniform coating with wet film thickness not less than 125 microns. This coat should be allowed to dry before continuing. Queries relating to spray application should be referred to the local Fosroc office prior to the commencement of work. For further information about application techniques, please consult Fosroc.

The second coat of Dekguard S100 should be applied exactly as detailed above. Thus achieving a dry film thickness not less than 100 microns in two coats..

Cleaning

Cementitious fairing coat should be removed from tools and equipment with clean water immediately after use.

Dekguard S100 should be removed from tools and equipment using Nitoflor Sol.

Limitations

Dekguard S100 is formulated for application to clean, sound concrete or masonry. The product should not be applied over dense, nonporous materials. Where application over existing sound coating or paints is required, trials should be conducted to ensure compatibility and retention of the bond between the underlying coatings or paints, the performance characteristics of Dekguard S100 may be impaired. Compatibility and soundness should be assessed on a trial area. For further advice, consult Fosroc.

Estimating

Packaging & coverage

Dekguard S100	5 & 20 litre cans
Nitoflor Sol	5 litre cans

Coverage

Dekguard S100	4-5 m ² per litre/ coat
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Factors like porosity, brush applied, roughness of the plaster, spary application, sand blasted surface, wind etc. affect the coverage.



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Storage

Shelf life

All products have a shelf life of 12 months if kept in a dry store in the original, unopened packs. If stored at high temperatures and/or high humidity conditions the shelf life may be reduced.

Precautions

Health & Safety

Dekguard S100 and Nitoflor Sol should not come in contact with the skin and eyes, or be swallowed. Adequate ventilation should be ensured and inhalation of vapours should be avoided. Some people are sensitive to resins, hardeners and solvents, hence suitable protective clothing, gloves and eye protection should be worn. If work is in confined areas, suitable respiratory protective equipment must be used. The use of barrier creams provide additional skin protection. In case of contact with skin, should be rinsed immediately with plenty of clean water and medical advice sought. If swallowed, medical attention sought immediately. Should not induce vomiting.

Fire

Dekguard S100 and Nitoflor Sol are flammable, should be kept away from sources of ignition. Smoking not allowed. In the event of fire, extinguish with CO₂ or foam, should not use a water jet.

Flash points

Dekguard 42°C

Nitoflor Sol 33°C

Additional information

Fosroc manufactures a wide range of products specifically designed for repair and refurbishment of damaged reinforced concrete. This includes hand-placed and spray grade repair mortars, fluid micro - concretes, chemical resistant epoxy mortars and a comprehensive package of protective coatings. In addition, a wide range of complementary products is available. This includes joint sealants, water proofing membranes, grouting, anchoring and specialised flooring materials.

Fosroc have also produced several educational training videos which provide more detail about the mechanisms which cause corrosion within reinforced concrete structures and the solutions which are available to arrest or retard these destructive mechanisms. Further information is available from the publication : " Concrete Repair and Protection - The Systematic Approach'.

For further information about products, training videos or publications, contact the local Fosroc office.



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Important note :

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products whether or not in accordance with any advice, specification, recommendation or information given by it.

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