

Talrakote® XE (S)

Solvent based Anti-carbonation, acrylate based, UV resistant protective cum decorative coating for concrete and masonry substrates



The Construction Alchemists

Description

Talrakote® XE (S) is an anticarbonation protective coating for RC structures exposed to atmosphere to prevent carbonation, chlorides and sulphate attack on both new and existing structures. It comprises of a Silane siloxane primer and a solvent based top coat. It is available in a selected range of colors.

Features & Benefits

- Excellent barrier to carbon dioxide, chloride ions, sulphates, oxygen and water.
- Highly UV resistant breathable gives exceptional resistance to the effects of long term weathering.
- Aesthetic- selected range of colors available.
- Ease of application - single part, can be directly applied from the pack using brush or lambs wool roller.

Primary Application

Talrakote® XE(S) is used to protect any RC and masonry structures exposed to the atmosphere. Talrakote® XE(S) is suitable for use on all types of infrastructures like road & rail bridges, fly overs, industrial and commercial RC buildings which are exposed to aggressive industrial, marine and saline environments. Talrakote® XE(S) is recommended for both new construction and post repair and rehabilitation.

Technical properties

Specific gravity	1.20
Adhesive bond strength to concrete (ASTM D4541)	> 2.5N/mm ²
Breathability test (ASTM E96)	Breathable
Resistance to UV radiation - Sample subjected to 1000 hours accelerated weathering in UV (ASTM D822)	Passes test
Percentage water absorption after 24 hours	Nil

Permeability BS:1881 (ml/m²/s)

After 2Hrs	Nil
After 6Hrs	Nil
After 24Hrs	Nil
After 48Hrs	10

Chloride ion diffusion in mg/l

After 24Hrs	Nil
After 48Hrs	Nil
After 72Hrs	Nil

Depth of Carbonation in mm

After 2Hrs	Nil
After 4Hrs	Nil
After 6Hrs	Nil
After 12Hrs	Nil
After 24Hrs	Nil

Depth of chloride penetration in mm

After 24Hrs	Nil
After 48Hrs	Nil

Design Criteria

Talrakote® XE(S) coating should be applied in two coats over Koster Polysil TG 500 at a wet film thickness of not less than 175 microns per coat. To achieve the correct protective properties, the primer and top coat must be applied on to the substrate at the recommended coverage rates.

Specification Clause

An anticarbonation, protective cum decorative surface coating shall comprise of Koster Polysil TG 500 and Talrakote® XE(S) top coat, a single component aliphatic acrylate coating. The total dry film thickness of the coating shall be not less than 175 microns in two coats 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 as per IS: 3085 at 24 hours.

Application Instruction

Surface Preparation

All surface should be dry and free from bond breaking substances such as loose particles, oil, grease, soiled surface moss, algae growth, laitance, and all traces of mould release and curing agents. Light sand blasting the surface is recommended for better surface preparation. Where moss, algae or similar growths have occurred, treatment with a proprietary biocide should be carried out after the sand blasting.

On the surfaces containing blow holes or similar surface undulations it should first be filled using a suitable cementitious fairing coat like Rendercem® SC (for further details, refer to Talrak). The cementitious fairing coat should be allowed to cure for about 48 hours depending on ambient conditions before the application of Koster Polysil TG500.

Priming

Any areas where the coating is undesirable should be masked. Plants, grass, joint sealants, asphalt and painted areas should be protected during application. The primer should be applied in one or more coats until the recommended application rate of 0.2 kg/m² is achieved. This is best accomplished by using portable spray equipment of the knapsack type. The primer should be allowed to dry for a minimum of two hours (at 25°C) before application of Talrakote® XE(S). Under no circumstances should the primer be overcoated until the surface is properly dry.

Top Coating

Particulars	Talrakote® XE (S)
Recommended wet film thickness (WFT)	350 microns
Recommended dry film thickness (DFT)	175 microns
Recommended number of coats	2 - 3 (depending on application conditions and method)
Over coating time	After 1 hour at 27°C

Talrakote® XE(S) should be applied to form a continuous coat without any break. All primed substrates should be treated with two coats of Talrakote® XE(S). The material should be stirred thoroughly before use. The first coat should be applied to all areas by the use of suitable brushes or rollers to achieve a uniform coating with wet film thickness not less than 175 microns. This coat should be allowed to dry before proceeding with subsequent coats. The second coat of Talrakote® XE(S) should be applied exactly as detailed above, achieving a wet film thickness not less than 175 microns.

Note: Application should not commence if the temperature of the substrate is 10°C and falling and above 45° C. Queries relating to spray application should be referred to the local Talrak office prior to the commencement of work. For further information about application techniques, please consult Talrak.

Estimating Packaging

Koster Polysil TG 500 - 10 kg jerry can.
Talrakote® XE (S) - 5 kg, 10kg and 20kg pack.

Coverage

Koster Polysil TG 500 - 5m²/kg
Talrakote® XE(S) - 2.5m²/kg/coat

For good quality of concrete and anti-carbonation environment, the above coverage rate is recommended. The coverage figures given are theoretical. Due to wastage factors and the variety and nature of possible substrates, practical coverage figures may be reduced.

Storage

Talrakote® XE(S) has a shelf life of 12 months if kept in dry store in original, unopened containers. If stored at high temperature and/or high humidity conditions the shelf life may be reduced.

Health & Safety

Koster Polysil TG 500, Talrakote® XE(S) are flammable, should be kept away from sources of ignition. Smoking is not allowed. In case of fire extinguish with CO or foam. Water should not be used.

Important note :

Talrak 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 Talrak 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.



Talrak Construction Chemicals Pvt. Ltd.

An ISO 9001:2015 Certified Company

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