

Protectosil® DRY CIT

Highly efficient, in water redispersible powdery corrosion inhibitor based on Multifunctional Silane Systems™ for cementitious building materials

Technical Data

Properties and test methods	Value	Unit	Method
Appearance	Free flowing white powder		
Powder density	250-450	g/l	DIN EN ISO 60
Residual moisture	< 2	%	
Water soluble chloride according EN 480-10	< 0,1	%	according to EN 480-10
pH (10% in water)	6-9		
Alkalinity (Na ₂ O + K ₂ O)			

Registration

Protectosil® DRY CIT

EINECS/ELINCS (EU):	Yes
AICS (Australia):	No
DSL/NDSL (Canada):	*
PICCS (Philippines):	Yes
TSCA (USA):	Yes
IECS (P.R. China):	*
ENCS (Japan):	No
ECL (South Korea):	Yes
* = available on request	

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Safety and Handling

Before considering the use of Dynasylan® and Protectosil® products please read its Material Safety Data sheet (MSDS) thoroughly for safety and toxicological data as well as for information on proper transportation, storage and use. The Material Safety Data Sheet is available after registration on our website www.dynasylan.com or upon request from your local representative, customer service or from Evonik Industries AG, Product Safety Department, E-MAIL sds-im@evonik.com.

Packaging and Storage

Protectosil® DRY CIT is supplied in standard package: 15 kg paper bag with polyethylene inliner or palette with 30 paper bags at 15 kg each. Other packages such as Big Bags or silo transport vehicles are available upon request. Storage under dry conditions at temperatures below 30 °C is strongly recommended. The shelf life is at least 12 months. Bags which are stored under pressure, are damaged or left open over longer periods of time tend to contain agglutinated material.

Properties and Use

Protectosil® DRY CIT is

- a white free flowing powder,
- qualified as additive in cement based mixtures for an extensive protection of the steel rebars in reinforced concrete against corrosion due to water and water dissolved chlorides.

Protectosil® DRY CIT

- chemically bonds with steel, cement phase and other siliceous material present in the concrete and the surface of the steel,
- does not influence the colour and the surface appearance of concrete
- leaves the concrete water vapour permeable,
- reduces significantly the uptake of water
- modified mortars show excellent wetting properties during processing

Protectosil® DRY CIT is especially suited for

- repair mortars,
- modification of cement,
- steel-reinforced cast-in-place,
- structures such as **parking decks**, facades, balconies, walkways, piers, bridge decks, beams, columns, and other steel-reinforced concrete structures,
- marine environments with high relative humidity and areas where de-icer salts are used

Processing

Protectosil® DRY CIT can be handled in all standard compulsory mixers for powdery cement based products. Potential interactions with further additives have to be tested. The recommended dosage of **Protectosil® DRY CIT** is in the range 2 – 5 % based on the cement weight in the end formulation.

Protectosil® DRY CIT containing formulations are smoothly miscible with water. It is recommended to stir the **Protectosil® DRY CIT** containing end formulation into the mixing water using the appropriate vessel and mixer. Too intensive mixing can cause unwanted air insertion. A ripening time of 1 – 5 minutes, depending on the used additives, has to be considered prior to the application.

Protectosil® DRY CIT was tested at SGK (Schweizerische Gesellschaft für Korrosionsschutz) with excellent results. The test was carried out via wet/dry cyclic ponding in aqueous NaCl solution (wet: two days ponding in 0.1 M NaCl solution, dry: 5 days at 35 °C). Two complete cycles are equivalent to 1 year outside weathering. The whole test period lasted 520 days (equivalent to appr. 35 years outside weathering).

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