

# Protectosil® WA CIT

**Water based corrosion inhibitor suited for mass modification of steel reinforced concretes or concrete repair materials**

## Technical Data

Properties and test methods	Value	Unit	Method
Appearance	white liquid	-	-
Active content	50	%	-
pH (20°C)	9.5 - 11.5	-	-
Density (20 °C)	approx. 1	g/cm <sup>3</sup>	DIN 51757

## Registration

### Protectosil® WA CIT

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

## Safety and Handling

Before considering the use of Protectosil® products please read its Safety Data sheet (SDS) thoroughly for safety and toxicological data as well as for information on proper transportation, storage and use. The Safety Data Sheet is available on our website [www.protectosil.com](http://www.protectosil.com) or upon request from your local representative, customer service or from Evonik Operations GmbH, Product Safety Department, E-MAIL [sds-hu@evonik.com](mailto:sds-hu@evonik.com).

**Protectosil® WA CIT** is a waterborne emulsion which is based on a multifunctional silane system specially designed to protect embedded steel rebars against corrosion caused by chlorides. As part of the concrete mix design, Protectosil® WA CIT is homogeneously distributed throughout the concrete, thereby offering an effective protection against chloride induced corrosion.

## Properties and Use

### Protectosil® WA CIT


- Chemically bonds to rebar surface and cement matrix
- Effectively protects embedded steel reinforcement against chloride induced corrosion
- Reduces the drying shrinkage of concrete
- Essentially free of volatile organic compounds (VOC)

**Protectosil® WA CIT** is preferably designed for:

- Steel reinforced concrete
- Prefabricated concrete elements
- Two component concrete repair mortars according to EN 1504-2 or EN 1504-7
- Shotcrete
- Building materials which are exposed to high chloride environments, such as sea water or de-icing salts (e.g. marine constructions, harbours, parking garages, tunnel or highways)

## Packaging and Storage

**Protectosil® WA CIT** is supplied in 25 kg (canister), 200 kg (drum) and 920 kg (IBC) containers. **Protectosil® WA CIT** is not frost resistant and should be stored at temperatures between 4°C and 40°C. **Protectosil® WA CIT** has a shelf life of 12 months if properly stored in originally sealed packages.



Nr. 0921 – CPR - 2175

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EN 934-2:2009+A1:2012

### **Protectosil® WA CIT**

Water resistant admixture for concrete  
EN 934-2:T9

Chloride ion content	max. 0,1 %by mass
Alkali content	max. 0,5 % by mass
Corrosion behaviour	passed
Compressive strength	passed
Capillary absorption	passed
Air content	passed

## Processing

The recommended dosage of **Protectosil® WA CIT** in concrete is in the range of 1.0 – 2.0 % based on the cement weight in the concrete mix design. In terms of other cement based materials such as e.g. dry mix mortar we recommend to use 0.2 - 0.5 % by mass on the total dry formulation.

**Protectosil® WA CIT** should be added directly to the concrete mixture during the mixing procedure. It is highly recommended to check interaction with other auxiliaries or additives in advance.

Studies performed at the Swiss Society for Corrosion protection have proven **Protectosil® WA CIT** to be highly effective in protecting steel reinforced concrete against corrosion. In addition to that, **Protectosil® WA CIT** decreases the drying shrinkage of concrete. In some cases **Protectosil® WA CIT** can slightly decrease the early strength development of concrete, but this effect levels off over time.

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