

# 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 Resource Efficiency 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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EVONIK Resource Efficiency GmbH  
Rodenbacher Chausee 4  
D – 63457 Hanau

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4153-99086719-0001

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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#### **Europe / Middle-East / Africa / Row**

##### **Evonik Resource Efficiency GmbH**

Business Line Silanes  
Rodenbacher Chaussee 4  
63457 Hanau-Wolfgang  
Germany  
PHONE +49 6181 59 13636  
FAX +49 6181 59 713 915  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik (SEA) Pte. Ltd.**

Business Line Silanes  
3 Internatioanl Business Park  
#07-18, Nordic European Centre  
Singapore 609927  
PHONE +65 6809 6899  
FAX +65 6809 6699  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik Taiwan Ltd.**

Business Line Silanes  
Artist Construction Bldg  
9F, No. 133  
Min Sheng East Road, Sec 3  
Taipei, 105 Taiwan, R.O.C.  
Taiwan 10596  
PHONE +886 227 17 1242  
FAX +886 227 17 2106  
protectosil@evonik.com  
www.protectosil.com

#### **North America**

##### **Evonik Corporation**

Business Line Silanes  
299 Jefferson Road  
Parsippany, NJ 07054-0677  
USA  
PHONE (TOLL FREE) +1 800 828 0919  
FAX +1 973 929 8503  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik (Shanghai) Co. Ltd.**

Business Line Silanes  
55, Chungdong Road  
Shanghai 201108  
P.R. China  
PHONE +86 21 6119 1660  
FAX +86 21 6119 1075  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik Japan Co. Ltd**

Business Line Silanes  
12th Floor Monolith Building  
2-3-1, Nishi-Shinjuku-ku  
Tokyo 163-0912  
Japan  
PHONE +81 353 23 7446  
FAX +81 353 23 7397  
protectosil@evonik.com  
www.protectosil.com

#### **Latin America**

##### **Evonik Brasil Ltda.**

Business Line Silanes  
Alameda Campinas, 579  
01404-000 São Paulo-SP  
Brazil  
PHONE +55 11 3146 4123  
FAX +55 11 3146 4148  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik Korea Ltd.**

Business Line Silanes  
94, Galsan 1-dong  
Bupyeong-gu  
Incheon, 403-081, Korea  
PHONE +82 2320 4778  
FAX +82 2783 2520  
protectosil@evonik.com  
www.protectosil.com

#### **Asia / Pacific**

##### **Evonik India Pvt. Ltd.**

Business Line Silanes  
Krislon House  
Saki Vihar Road, Anderi (E)  
Mumbai - 400 072  
India  
PHONE +91 226 7238 809  
FAX +91 226 7238 811  
protectosil@evonik.com  
www.protectosil.com