

MasterProtect 8000 CI

Advanced Organofunctional Silane based Corrosion Inhibitor

DESCRIPTION

MasterProtect 8000 CI is a single component, ready to use, low viscosity, clear liquid which combines the proven effectiveness of penetrative silane treatments for the control of moisture and chloride ion ingress with advanced organofunctional corrosion inhibition.

FIELD OF APPLICATION

MasterProtect 8000 CI is sprayed directly onto the surface of steel reinforced concrete structures and buildings. It is equally suited to cast in situ, precast, post tensioned, prestressed, GFRC, or other steel reinforced concrete.

MasterProtect 8000 CI can be used as part of an overall repair strategy using MasterEmaco Concrete Repair Systems to mitigate corrosion rates within the balance of the structure and significantly reduce the possibility of “tring anode” induced spalling at a later date.

Equally MasterProtect 8000 CI can be used as a cost effective preventative measure before the onset of corrosion induced problems occur.

Contact your local BASF Construction Chemicals representative for further information.

It is particularly suited for the protection of:

- Bridge decks, piers columns and beams.
- Multi-Storey car parks, building facades and balconies.
- Marine structures and jetties.

FEATURES AND BENEFITS

- Dramatically reduces chloride induced corrosion of concrete steel reinforcement
- Reduces corrosion in carbonated reinforced concrete
- Works at the molecular level to effectively inhibit macrocell (rebar to rebar) and microcell (on the same rebar) corrosion
- Proven long term effectiveness in laboratory and field trials > 7 years proven performance in aggressive environment subject to deicing salts and vehicular traffic
- Equally effective in high humidity conditions
- Chemically bonds to steel, cement paste and other silaceous material – will not wash or leach out during wetting / drying cycles, ensuring extended active life
- Simple and easy to use
- Does not discolor or change appearance of concrete

- Breathable vapor permeable treatment
- Repels further ingress by chlorides and water

APPLICATION METHOD

(a) Surface Preparation

Concrete surfaces must be dry and cleaned to remove all traces of mould oil, curing compounds, dirt, dust, efflorescence, mould, algae, grease, oil asphalt, paint, lacquers, or other coatings or any other materials that would prevent penetration.

Acceptable cleaning methods include shot blasting, high pressure water blasting, or grinding.

All delaminated, loose or spalled concrete must be removed and repaired with an approved product from the MasterEmaco concrete repair range.

MasterProtect 8000 CI can, as an additional protective measure, be applied directly to exposed rebar before repair work commences.

Nonmoving shallow shrinkage cracks with no structural significance are simply treated with multiple coats or ponding of MasterProtect 8000 CI.

Other cracks or failed joint sealants should be routed clean and treated with MasterProtect 8000 CI before being filled with suitable joint sealant from the MasterSeal range or similar approved.

(b) Mixing

MasterProtect 8000 CI is a ready to use product. Do not mix or add anything in to the material.

(c) Application

Apply MasterProtect 8000 CI to the entire surface to be protected, including any repaired areas, using low pressure spray equipment with a suitable fan nozzle.

A total application of 0.35kg/m² – 0.53kg/m² is usually required applied in two or three separate applications. Allow a minimum of 15 minutes between coats (or until visibly dry).

COVERAGE

A total application of 0.35kg/m² – 0.53kg/m² applied in two or three coats

FINISHING AND CLEANING

Tools and mixer must be cleaned after use with water.

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CURING

MasterProtect 8000 CI finishes its chemical reaction in two weeks.

WORKING TIME

MasterProtect 8000 CI only reacts with mineral based substrates. Therefore it does not react inside the container or application pump. As long as it is kept in its original container or inside a clean sealed pump, it can be used when ever needed during its shelf life.

PACKAGING

MasterProtect 8000 CI is available in 28 and 1000 litre containers.

STORAGE

MasterProtect 8000 CI should be stored under normal warehouse conditions between -15°C and 50°C.

Keep containers closed when not in use and away from naked flames, heat sources and sparks.

SHELF LIFE

12 months if stored in undamaged, unopened containers at above mentioned storage conditions.

WATCH POINTS

- Do not apply at temperatures below 5°C or over 35°C. Allow concrete surfaces to dry for between 24 and 72 hours after heavy rain or cleaning with water before applying MasterProtect 8000 CI.
- Do not apply if rain is expected within 4 hours.
- Do not alter or dilute the material as supplied

HANDLING AND TRANSPORT

Usual preventive measures for the handling of chemical products should be observed when using this product, for example do not eat, smoke or drink while working and wash hands when taking a break or when the job is completed.

Specific safety information referring the handling and transport of this product can be found in the Material Safety Data Sheet. For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

Disposal of product and its container should be carried out according to the local legislation in force. Responsibility for this lies with the final owner of the product.

CONTACT DETAILS

BASF plc,
Construction Chemicals,
19 Broad Ground Road
Lakeside
Redditch
Worcestershire
B98 8YP
Tel: +44 (0) 1527 512255
Fax +44 (0) 1527 503576
www.master-builders-solutions.basf.co.uk

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Product Data					
Property	Standard		Data	Unit	
Chemical Base	-		100 % Silane	-	
Color	-		Clear	-	
Density (23 °C)	-		0.88	g/cm ³	
Viscosity (23 °C)	-		0.95	mPa.s	
PH	-		7 - 8	-	
Flash Point	-		63	Celcius	
Application Temperature (ambient and substrate)	-		+5 - +35	Celcius	
Product Data					
U.S. Federal Highways Administration Test protocol for cracked Beam Concrete					
Test Method			Specimen conditioning	Observed results compared with untreated control specimens	
<p>MasterProtect 8000 CI was sprayed at the approved application rate onto standard test specimens where the concrete (W/C ratio 0,47) has been deliberately cracked along the length of the reinforcing steel to simulate real life experiences of transverse bridge deck cracking. Some specimens showed existing corrosion before application while others did not.</p> <p>The specimens were then subject to the following rigorous conditions:</p> <ul style="list-style-type: none"> • 48 weeks cyclic salt water ponding (15% salt solution). • High relative humidity: 70 – 80%. • Elevated temperatures: 37°C. 			Cracked concrete NO preexisting corrosion	99% reduction in corrosion	
			Cracked concrete: WITH existing corrosion	92% reduction in corrosion	
Product Data					
Reduction in chloride ingress according to ASTM 1152					
Control			MasterProtect 8000 CI treated		
12 weeks	24 weeks	48 weeks	12 weeks	24 weeks	48 weeks
0.703*	0.861	1.020	< 0.007	0.010	< 0.007
0.321	0.0628	0.645	< 0.007	< 0.007	< 0.007
0.032	0.0386	0.0386	< 0.007	< 0.007	< 0.007
< 0.007	0.040	0.040	< 0.007	< 0.007	< 0.007

*Chlorides measured according to ASTM 1152

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MasterProtect 8000 CI - BASF plc, Construction Chemicals, Version 2

Health and Safety

*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

Solvent Based Products

Use in well ventilated areas; avoid inhaling. Suitable respiratory equipment may be needed, eg when spraying. Can cause skin, eye irritation. Wear protective eye shields and gloves during use. Do not smoke or allow sparks or naked lights when stored or in use.

Resin Products

Can cause irritation, dermatitis or allergic reaction. Use protective equipment particularly for skin and eyes. Use only in well ventilated areas.

Spillage

Chemical products can cause damage; clean spillage immediately.

DISCLAIMER

"BASF plc, Construction Chemicals" (the Company) endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use.

Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application.

Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.