



# MasterProtect 8500 CI

## Quick Assessment Guide



# Decision-making diagram

## 1. Startingpoint

1.1 Risk factors

1.2 Damage types

## 2.1 Existence of corrosion

With active corrosion

1o Test



**2.1.1 Corrosion rate**

Without active corrosion

## 2.2 State of corrosion

2o Test (a)



**2.2.1 Degree of corrosion**

No need to replace rebars

Replacement of rebars is needed

Structural problem

**No inhibition**

No inhibition necessary

No guarantees

2o Test (b)



**2.2.2 Risk of corrosion**

No risk

With risk

## 2.3 Feasibility of protection

Unsuitable

3o Test



**2.3.2 Chloride limit**

Suitable

## 3. Application

**Inhibit**



# MasterProtect 8500 CI: Class-leading Concrete Protection







Reinforced concrete may be exposed to harsh environmental conditions that threaten its structural integrity. The MasterProtect and MasterEmaco product families provide a raft of solutions ranging from major repair and strengthening to prevention and preservation. MasterProtect 8500 CI is the class-leading, proven solution for corrosion inhibition.

## Concrete is exposed to various attacks

Corrosion, chloride attacks or carbonation are demanding challenges for concrete structures and buildings. Concrete protection is needed to safely preserve the visual appearance and to guarantee the longevity of concrete structures.

Concrete damage	mechanically	chemically	physically
Reinforcement corrosion	carbonation	chloride attacks	stray currents

## Product benefits at a glance:

 <p><b>Excellent application properties</b> Applied by spraying, roller or brush</p>	 <p><b>Durability</b> Long lasting even in harsh environments. Effective even in cracked concrete.</p>	 <p><b>Corrosion protection</b> Effective inhibition of both carbonation and chloride induced corrosion</p>
 <p><b>Certification, documentation and test reports</b> Tested in accordance with international standards</p>	 <p><b>Time-efficient installation</b> One-off installation cost</p>	 <p><b>Significantly reduces water ingress</b> Protection against weathering effects.</p>

The MasterEmaco and MasterProtect solutions include a large range of concrete repair mortars and concrete surface protection systems for specific project requirements.



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## Quick Guide for Specifiers

The corrosion of steel reinforcement in concrete is one of the main causes of severe damage to reinforced concrete structures. Especially in marine environments, damage is costly and the problem is difficult to solve due to chloride attacks (sea water and airborne salts). Specifying the most appropriate treatment for each specific case is an important task.



### Solutions for structural repair projects

This quick guide for architects, engineers and construction foremen in general, is intended to be a simple and easy tool to support the specification of the proven corrosion inhibitor MasterProtect 8500 CI by Master Builders Solutions – our solution for structural repair projects affected by corrosion. The aim is to protect the concrete and to restore its original properties and the durability it was designed for.

### Decision-making diagram

This guide systematically presents the conditions under which MasterProtect 8500 CI must be applied in order to ensure effective treatment. The systematic procedure described includes simple checks to take into consideration the condition of the structure. The guide also provides recommendations for application. This guide contains a decision-making diagram with simple explanations concerning each aspect, allowing the specifier to consider and choose the most appropriate treatment and the repair solution that brings the greatest economic benefits (s. foldout).



# MasterProtect 8500 CI – Extend the service life of your concrete structure

As a result of growing calls for reinforced concrete structures with longer service life is, there is considerable demand for prevention and repair techniques. MasterProtect 8500 CI addresses these challenges – in the most effective, reliable and durable way.

Structural concrete damage caused by corrosion is normally repaired by conventional methods, such as removing the parts which are affected and rebuilding the section with structural repair mortars.

However, other repair techniques are often more convenient and economical than these conventional methods. They include the use of surface-applied corrosion inhibitors.

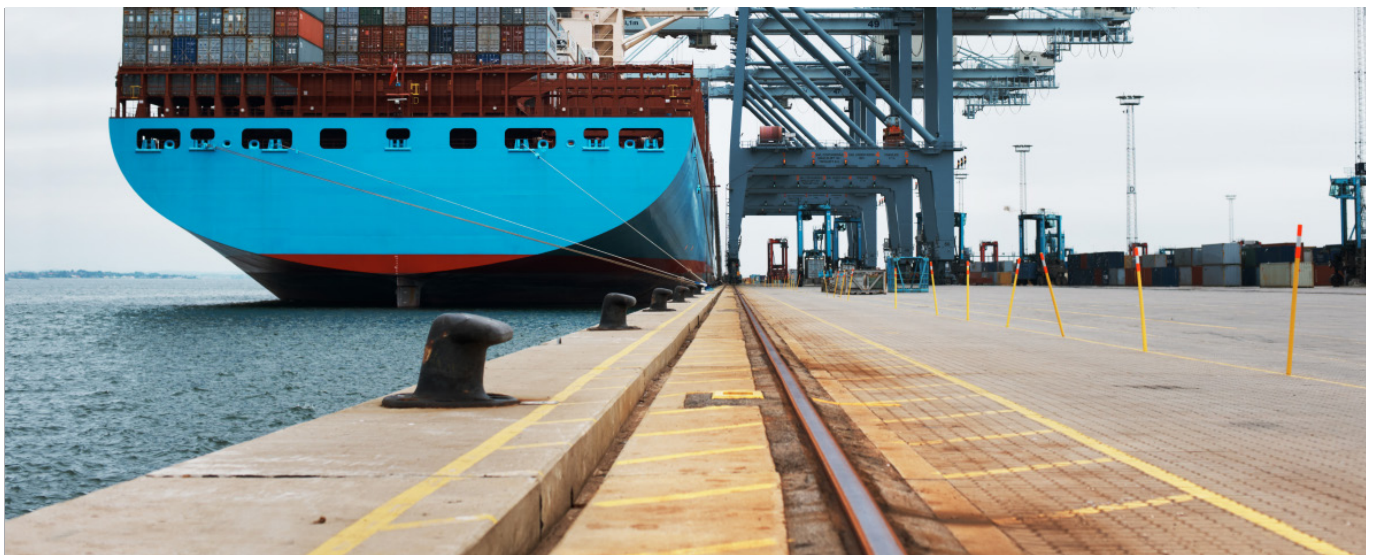
## Single-component, silane-based corrosion inhibitor

MasterProtect 8500 CI is liquid corrosion inhibitor that is applied to the concrete surface direct by spraying, rolling or brushing. Due to its properties, MasterProtect 8500 CI migrates through the porosity of the concrete to the rebar, where it generates a high-resistivity environment which stops the corrosion process and therefore prevents further damage caused by corrosion.

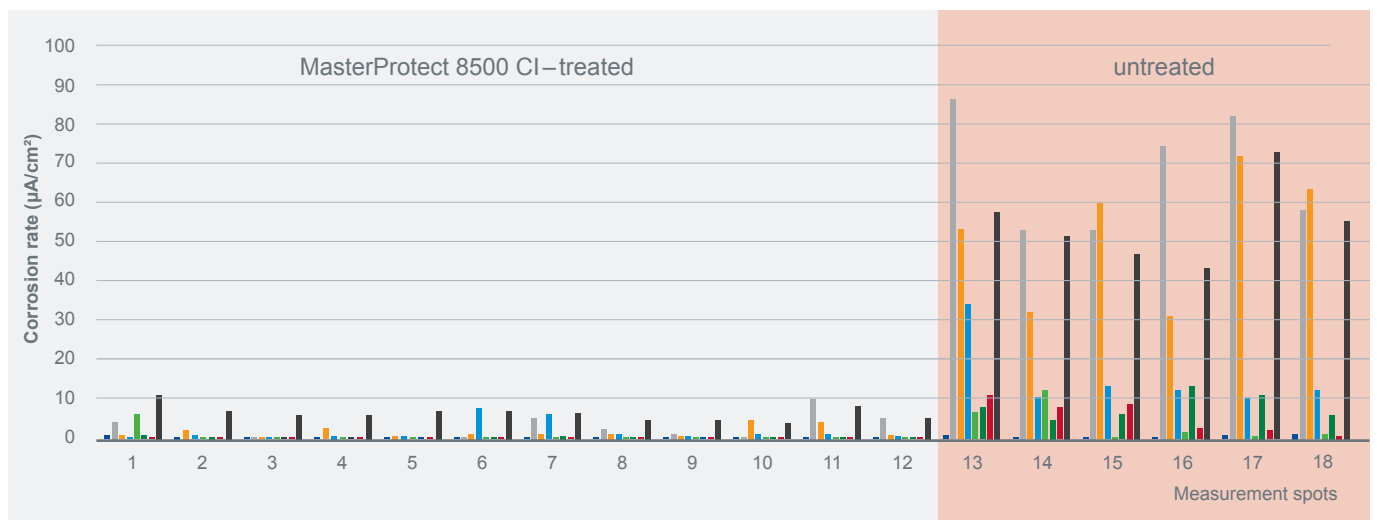
## MasterProtect 8500 CI – Expressed in figures

**50%** cost  
reduction

MasterProtect 8500 CI allows significant cost reductions compared with traditional concrete repair methods. Total project savings can exceed 50% depending on conditions.



**MasterProtect 8500 CI:**  
**Outstanding performance supported by field tests**



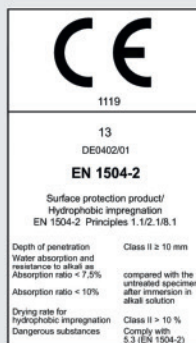
■ Day 1   ■ Day 43   ■ Day 88   ■ Day 186   ■ Day 278   ■ Day 370   ■ Day 544   ■ Day 724

Corrosion rates after treatment with MasterProtect 8500 CI at a hotel parking garage in Texas, USA.  
© Master Builders Solutions

**The certified, proven corrosion inhibitor**

MasterProtect 8500 CI is a certified product. Several test reports prove its effectiveness for repairing reinforced concrete structures affected by corrosion.

It is a unique surface-applied corrosion inhibitor. Several independent test reports confirm its effectiveness in inhibiting corrosion in reinforced concrete structures. In addition to laboratory research, the superior performance of MasterProtect 8500 CI in the field is being monitored on several job sites around the world.



### Cost-effective, time-saving protection with MasterProtect 8500 CI

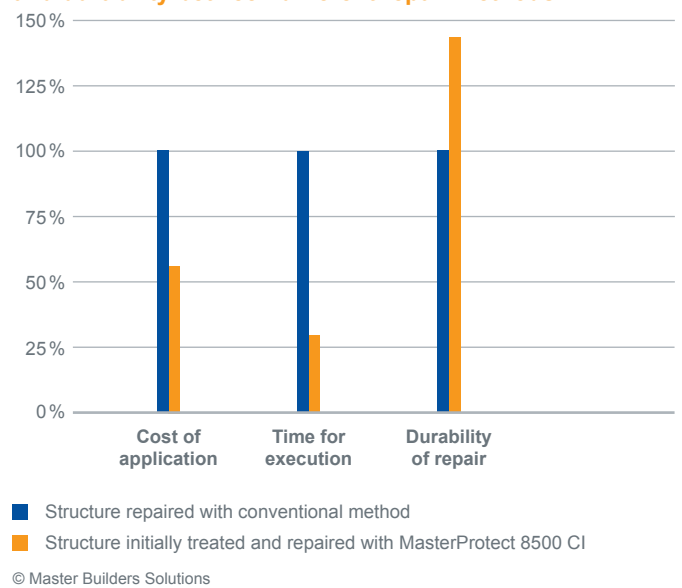
Ageing infrastructure and concrete buildings represent a major problem in many countries. Many of the existing structures in Europe were built following the Second World War, in the 1950s and 1960s. These structures are now about 60 years old. Poor construction practice and the poor quality of the materials available mean that most of these buildings are affected by significant deterioration connected with the corrosion of steel reinforcement.

It will be essential to demolish and rebuild some of the structures. However, it will not be technically feasible to replace all the old buildings. In addition, the replacement of all existing structures affected by corrosion damage would not be economically viable. The environmental impact of reconstruction on a massive scale would be very severe. It is therefore crucial to refurbish and maintain these buildings using methods that are economical, practical and sustainable.

### Reducing the cost of maintaining infrastructure and buildings

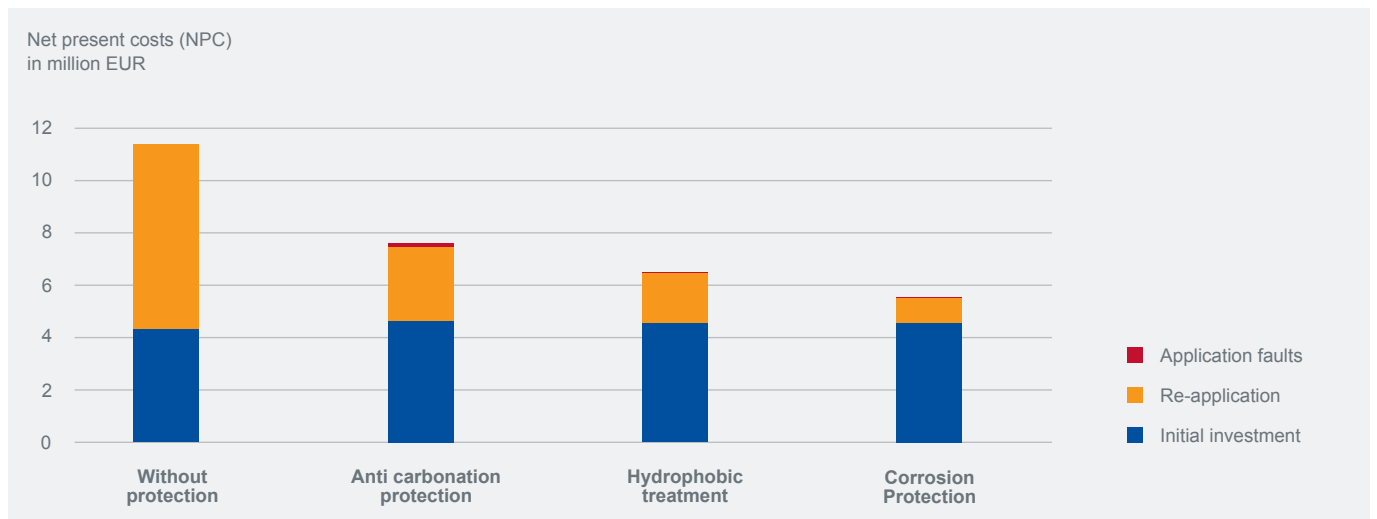
Structures treated with MasterProtect 8500 CI will be more durable and require less maintenance work MasterProtect

### Relative comparison of cost, application time and durability between different repair methods



8500 CI therefore reduces maintenance costs over the expected lifetime of the structure.

### MasterProtect 8500 CI: Lowest overall cost LCC comparison – cost breakdown







# BREAKWATER

DANGER  
NO ENTRY  
KEEP OFF JETTY



# 1. Starting point

Single-component, silane-based corrosion inhibitor

## Why inhibit corrosion?

- Because there is a risk of corrosion
- Because corrosion has already occurred

In what situations is there a risk of corrosion?

Situations where chlorides and carbonation are present  
(See 1.1. Risk factors)

What can indicate that corrosion has occurred?

The degree of damage observed  
(See 1.2. Damage types)



## Why use inhibitors instead of conventional methods?

Even if the visible cracks are not yet critical and the functionality of the structure is not affected, the use of inhibitors is more effective and economical than conventional repair methods including mortars and bracing solutions.



## 1.1. Risk factors

The corrosion risk depends primarily on two factors:

- The type and quality of the concrete
- Exposure to aggressive substances such as chlorides or chemicals

Adverse climate conditions, chlorides in sea water, airborne salts in coastal areas or the use of de-icing salts are the main risk factors for chloride – induced corrosion.

### Risk situations

These factors mainly occur in the following situations:

- Marine structures and residential, commercial and industrial buildings in coastal areas
- Tanks, channels or pools containing chlorinated water
- Concrete floors and pavements treated with de-icing salts in the winter
- Porous and low-quality concrete, often typical of buildings constructed in the 1960s and 1970s



1 Buildings located in coastal areas

2 Typical marine structures such as quays, jetties, bridges in direct splash zones

3 Industrial tanks, silos or pools in contact with chlorinated water or exposed to airborne salts

4 Areas exposed to heavy use of de-icing agents (salts), e.g. parking decks



## 1.2. Damage types

Active corrosion processes in structures are clearly indicated by visible signs of damage.

### Rust marks

As a result of the porosity of the concrete and variations in the moisture content, oxidation products dissolved in water migrate to the surface of the structure, where they appear as rust marks. These spots are clear indications of an active corrosion process.



Rust marks

### Hairline cracks

In the early stages of corrosion, the increase in the volume of steel reinforcement in the concrete results in visible damage in the form of fissures or slight cracks. At this stage, before wider cracks or spalling occur, corrosion inhibitors can still be applied. However, if the situation is allowed to continue, the structural integrity of the building will be compromised.



Hairline cracks

### Cracks

In advanced stages of damage, the increased volume of the steel bars – caused by oxidation – may result in the fracture of the concrete member. In this case, an appropriate structural evaluation and assessment is required to determine the risk of instability. If it is still possible to apply MasterProtect CI 8500, these cracks must be properly repaired.



Cracks

### Spalling

If no action is taken, the oxidation process will continue. Pieces of concrete may break off as a result of the increased volume of the steel bars, leaving the bars exposed to the aggressive atmosphere. In such cases, the element may need to be taken out of service, and its treatment with a corrosion inhibitor is no longer advisable or feasible.



Spalling

### Avoiding expensive solutions

Depending on the severity of the damage, it may be possible to protect the structure with MasterProtect 8500 CI, avoiding the need for more complex and expensive refurbishment solutions. Following a certain time, the use of such solutions becomes unavoidable. (See 2.2. State of corrosion)





## 2. Corrosion tests

Reinforced concrete structure affected by corrosion

### Can we inhibit this process?

1<sup>a</sup>

Is there an active corrosion process?

See 2.1. Presence of corrosion

2<sup>a</sup>

What is the state of corrosion?

See 2.2. State of corrosion

3<sup>a</sup>

Is it possible to apply the inhibitor?

See 2.3. Feasibility of protection





## 2.1. Presence of corrosion

In addition to visible damage, corrosion in a structure may also be identified by in-situ measurements of the corrosion rate. It is also necessary to inspect actual conditions on site in order to make an effective assessment of the stability of the structure.

### 2.1.1. Corrosion rate



#### Objective

Confirm the presence of corrosion and the level of potential damage.

#### Data to be determined

- Corrosion rate ( $\mu\text{A}/\text{cm}^2$ )
- Electrical resistivity of concrete ( $\text{K}\Omega\text{cm}$ )

#### Measurement conditions

Humidity of concrete: it is essential to wet the concrete, the day before the measurement is made. The results of measurements in dry concrete are inconclusive because the resistivity of the concrete will be too high. For conclusive measurements of the corrosion rate, the electrical resistivity of the concrete must be lower than  $1000 \text{ K}\Omega\text{cm}$ .



#### Measuring equipment

Measurement devices using linear polarization such as GeCorr or Galvapulse are used. Master Builders Solutions provides support for the implementation of these on-site measurements.

#### Measurement procedure

A small section of a steel bar must be exposed in order to establish electrical contact with the measuring equipment.

#### Analysis of results

When the corrosion rate has been measured, the degree of corrosion can be assessed and the estimated time until damage becomes visible may be predicted using the table below:

#### Corrosion level

Corrosion ( $\mu\text{A}/\text{cm}^2$ )	Corrosion level	Estimated time to visible damage	Conclusion	Next step
> 1.0	High	< 2 years	With active corrosion	2.2.1. Degree of corrosion
0.5–1.0	Moderate	3–5 years		
0.1–0.5	Low	> 10 years	No active corrosion	2.2.2. Corrosion risk
< 0.1	Passive	–		



## 2.2. State of corrosion

### 2.2.1. Degree of corrosion



#### Objective

Check the structural integrity of the steel reinforcement with corrosion problems.

#### Results to be obtained

- Loss of concrete cover around reinforcement (section in mm)

#### Situations to be assessed

- Is corrosion damage visible or has it been detected?

#### Inspection procedure

Uncover the steel reinforcement and measure the loss of concrete section in relation to the original cross section of the concrete member.

#### Analysis of results

Check whether the remaining cross section of the reinforcement is still adequate to bear the design load.



#### Inspection of steel reinforcement

Structures should not be treated with MasterProtect 8500 CI, unless the remaining steel reinforcement is adequate to perform the required structural function.





## 2.2.2. Corrosion risk

Corrosion will not start if the steel reinforcement is passivated, with a pH above 11-12, and is protected by a layer of good-quality concrete with a certain minimum thickness.

### Attacks caused by harsh environments

Harsh environmental conditions may destroy the passivation of the reinforcement and trigger corrosion.

- Carbonation of concrete caused by carbon dioxide in the atmosphere will reduce the alkalinity of the concrete surrounding the steel reinforcement and destroy the passive layer. This phenomenon is very common in old or poor-quality concrete.
- Chloride ions induce corrosion pitting, which causes a significant reduction in the cross section of steel reinforcement in a relatively short period of time. This is typical of marine environments or areas where de-icing salts are frequently used.

The corrosion risk is evaluated on the basis of the presence of these aggressive substances, which may cause the passivation of the reinforcement to be lost, leading to corrosion.

Corrosion may not have started yet but may be about to start in the presence of these aggressive substances. It is therefore necessary to check whether the passivating mechanism is adversely affected and whether the reinforcement is at risk of corrosion.

## 2.2.2.1. Chloride content

### Objective

Check for the presence of chlorides in the concrete which will put the reinforcement at risk.

### Results to be obtained

- Chloride content, by weight with respect to the total concrete weight in accordance with local code requirements

### Situations to be assessed

- Areas near steel reinforcement and areas most likely to be damaged such as thin sections, old concrete with tightly packed reinforcements or areas of high porosity
- It should be noted that there may be variations in the chloride content in the same environment. For example, in buildings near the sea, certain areas may be more highly contaminated as a result of the prevailing wind conditions than other areas

### Inspection procedure

Core samples are extracted and analysed in a laboratory by the titration method, Master Builders Solutions provides support for carrying out chloride concentration measurements

### Analysis of results

The chloride content should not exceed limits established by the applicable local codes and standards. The limit is set at 0.4% by weight. Chloride concentrations above this level indicates a very high risk of immediate corrosion damage.

### Analysis of results

Chloride in concrete by weight	Pollution level	Conclusion	Next step
< 0.4 %	Acceptable	No corrosion risk	2.2.2.3. Risk analysis
> 0.4 %	Unacceptable	Yes corrosion risk	2.2.2.3. Risk analysis

## 2.2.2.2. Presence of carbonation

### Objective

Check whether the steel reinforcement is at risk of attack by the surrounding carbonated concrete.

### Results to be obtained

- Depth of the carbonation front (mm): Master Builders Solutions offers support for assessing the carbonation process

### Situations to be assessed

- Concrete area close to the reinforcement

### Inspection procedure

Phenolphthalein method: The reinforcement is uncovered by removing the surrounding concrete and phenolphthalein is applied.

Phenolphthalein is an indicator that will dye the areas of noncarbonated concrete pink. If staining is not observed, the concrete surrounding the reinforcement is carbonated and therefore the steel reinforcement is no longer protected against oxidation. The carbonation front is the depth in millimetres that does not stain with phenolphthalein. If it is equal to or greater than the concrete cover of the reinforcement layer, corrosion is likely to have already started.



### Analysis of results

Carbonation depth (mm)	Contamination level	Conclusion	Next step
0	No contamination	No corrosion risk	2.2.2.3. Risk analysis
< concrete cover thickness	Reinforcement will be at risk in future	Yes corrosion risk	2.2.2.3. Risk analysis
≥ concrete cover thickness	Reinforcement at risk		

### 2.2.2.3. Risk analysis






The risk of corrosion of a structure is evaluated on the basis of the results of the two preceding paragraphs: chloride content and carbonation presence.

or may not be effectively protected in the near future. In this case, the best approach is to apply a protective treatment with MasterProtect 8500 CI.

If the results obtained indicate a corrosion risk, the steel reinforcement is no longer effectively protected by the concrete

If treatment is delayed, corrosion will probably become more severe and the cost of future repairs will be higher.

#### Action – to be taken depending on the risk observed

		Chloride content (2.2.2.1)			
		Risk 		No risk 	
Presence of carbonation (2.2.2.2)	Risk 	Requirements	Action	Requirements	Action
		Next step	2.3. Feasibility of Protection	Next step	3. Application
	No risk 	Requirements	Action	No risk 	
		Next step	2.3. Feasibility of Protection		

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## 2.3. Feasibility of protection

### 2.3.1. Structural stability



Structures with limited corrosion damage may be protected using MasterProtect 8500 CI corrosion inhibitor to prevent the development of corrosion damage that would call for costly repair work. Loose or spalled concrete cover must be replaced with structural repair mortars such as MasterEmaco S before a corrosion inhibitor is applied. If the cross section of the steel reinforcement has been reduced beyond the limits set by applicable the national or international codes and standards, the damaged reinforcement must be replaced in accordance with the relevant codes. Structural stability must be verified and corrosion protection must then be applied. MasterProtect 8500 CI must not be applied to a structure, before the structural stability of the structure has been verified in accordance with the applicable national building codes and standards.

### 2.3.2. Chloride limit



**Objective**

Check whether the effectiveness of the corrosion inhibitor may be guaranteed. If the chloride content is above 2% by weight, the effectiveness of the inhibitor may be reduced.

**Results to be obtained**

- Chloride content relative to the weight of the sample, in %. Master Builders Solutions provides support for these measurements

**Situations to be assessed**

- Concrete areas close to the reinforcement
- Areas subject to higher risks (thin sections, porous concrete)

**Inspection procedure**

Sampling and laboratory analysis by titration methods.

**Analysis of results**

Chloride content by weight	Chloride limit	Conclusion	Next step
< 2%	Below limit	Inhibit <b>with</b> guarantees	3. Application
> 2%	Unacceptable	Inhibit <b>without</b> guarantees	Application after preparation*

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\* Preparation: extract the chlorides or replace the contaminated concrete



## 3. Application

### What needs to be considered when applying MasterProtect 8500 CI?

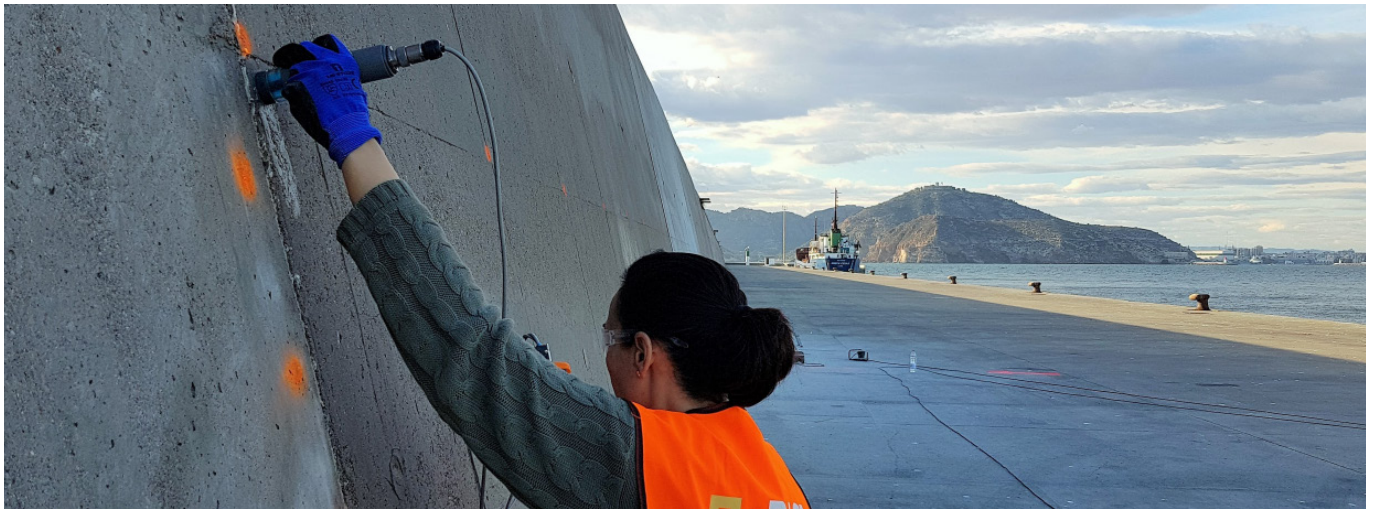
Application considerations  
(See 3.1. Application considerations)

Material specifications  
(See 3.2. Application instructions)





## 3.1. Application considerations



### Support

MasterProtect 8500 CI can be applied to the surface of any new or older concrete structure. It can be applied to carbonated concrete or in presence of chloride if the chloride content does not exceed 2% by weight.

The substrate must be clean, dry and free from grease, old paint, soot, dust, moss, saltpetre, efflorescence and in general, any substance which could prevent penetration. Damaged or delaminated concrete should be removed.

MasterProtect 8500 CI can be applied prior to the use of repair mortar or as an after-treatment. Hairline cracks may be treated simply by applying several coats of MasterProtect 8500 CI. Major cracks should be opened and treated with sealants such as MasterSeal prior to applying MasterProtect 8500 CI.

### Precautions

- Use personal protective equipment as specified in the Safety Data Sheet
- Gardens must be protected from the product
- Avoid dust generation during application
- Observe the waiting time between the application of coats

### Finish

Treated concrete surfaces may be coated using various MasterProtect branded protective coatings and MasterSeal branded waterproofing solutions. No additional treatment is required on surfaces protected with MasterProtect prior to the application of further coatings.

### Conditions for application



Do not apply in strong sunlight



Do not apply when wind speeds exceed 15 km/h



Apply at temperatures between 5–38°C



Do not apply if rain is expected within 4 hours after application or if it has rained in the last 72 hours



## 3.2. Application instructions



### Application

Direct application to the concrete surface by low pressure spray (garden spray), brush or roller.

### Consumption of inhibitor

600g/m<sup>2</sup> of product, applied in two or three coats. If the recommended quantity of product is not used, the durability of the corrosion inhibition effect may be impaired.

### Number of coats

- Vertical surfaces and ceilings: 3 coats, minimum 200g/m<sup>2</sup>
- Floors: 2 coats, of minimum 300g/m<sup>2</sup>



### Waiting time between coats

Approximately 15 minutes – or until the concrete surface which has been treated is dry.

### Mixture

The product is ready to use and no extra material is needed. Shake briefly before application to homogenize.



## Our services



### Master Builders Solutions approved applicators

Master Builders Solutions has a network of business partners – specially trained by Master Builders Solutions in the use of our products and systems. Approved applicators will offer the best possible service to ensure that projects are completed to customers' satisfaction.



### Specialized technical services

Our highly specialized technical service team offers a unique and distinctive service. Our technicians can help you in all phases of the work: from project preparation to project implementation and the post-completion stage.



### Support for designers and specifiers

We work on all stages of the value stream. Master Builders Solutions has a team of specialized technicians providing support to surveyors, engineers, architects and specifiers in general during all phases of construction projects. Our team of technical specifiers works for designers every day, offering answers to their questions.







**Sales team to serving our customers**

Our sales team is active nationwide and can provide the support and advice you need to solve all your construction challenges.



**Wide range of products and solutions for construction**

In addition to innovative products for repairing structures such as MasterProtect 8500 CI, Master Builders Solutions offers complete systems for concrete waterproofing, sealants, admixtures, concrete repair and protection, as well as our proven high-quality performance flooring and Ucrete solutions.



**All the information you need at your fingertips**

Download our official application of Master Builders Solutions by Master Builders Solutions on your mobile phone for free. In our App you can consult product data sheets, catalogues, construction systems, videos and much more useful information. You can also check our website [www.master-builders-solutions.basf.com](http://www.master-builders-solutions.basf.com)







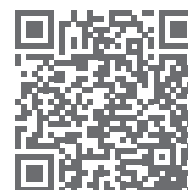
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### Online Planning Tool

The Online Planning tool is designed especially for specifiers, planners and engineers. It helps you define the solution you are looking for by industry and building type, and download a customized specification report including BIM objects, certificates and full product-related documentation in only 3 steps. Start now!

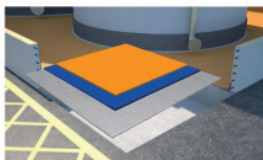
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### Solunaut

Solunaut is a tool designed for all professionals in the construction industry. It provides an overview of our solutions by application in the food and beverage, chemical and waste-water industry, including TDS and the possibility of contacting us directly if there are any questions.

[solunaut.master-builders-solutions.com](https://solunaut.master-builders-solutions.com)



### BIM

With more than 200 BIM objects, and soon more than 400 Revit models, the Master Builders Solutions BIM portfolio is the largest in the construction chemicals industry. It covers thirteen construction industry segments, such as Waterproofing Systems, Performance Flooring, Concrete Repair or Protective Coatings, as well as Expansion Control Systems and Wall Systems.

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# Master Builders Solutions





### Master Builders Solutions

The Master Builders Solutions brand brings all of our expertise together to create chemical solutions for new construction, maintenance, repair and renovation of structures. Master Builders Solutions is built on the experience gained from more than a century in the construction industry. The know-how and experience of a global community of construction experts form the core of Master Builders Solutions.

We combine the right elements from our portfolio to solve your specific construction challenges. We collaborate across areas of expertise and regions and draw on the experience gained from countless construction projects worldwide. We leverage global technologies, as well as our in-depth knowledge of local building needs, to develop innovations that help make you more successful and drive sustainable construction.

The comprehensive portfolio under the Master Builders Solutions brand encompasses concrete admixtures, cement additives, solutions for underground construction, waterproofing solutions, sealants, concrete repair & protection solutions, performance grouts, performance flooring solutions and solutions for on- and offshore wind energy.

### Our comprehensive portfolio

- Concrete admixtures
- Cement additives
- Chemical solutions for underground construction
- Waterproofing solutions
- Sealants
- Concrete repair and protection solutions
- Performance grouts
- Wind turbine grouts
- Performance flooring solutions

**Please do not hesitate to contact us for more specific information!**





# Master Builders Solutions for the Construction Industry

## MasterAir

Complete solutions for air entrained concrete

## MasterBrace

Solutions for concrete strengthening

## MasterCast

Solutions for the manufactured concrete product industry

## MasterCem

Solutions for cement manufacture

## MasterEase

Low viscosity for high performance concrete

## MasterEmaco

Solutions for concrete repair

## MasterFinish

Solutions for formwork treatment and surface improvement

## MasterFlow

Solutions for precision grouting

## MasterFiber

Comprehensive solutions for fiber reinforced concrete

## MasterGlenium

Solutions for high performance concrete

## MasterInject

Solutions for concrete injection

## MasterKure

Solutions for concrete curing

## MasterLife

Solutions for enhanced durability

## MasterMatrix

Advanced rheology control for concrete

## MasterPel

Solutions for hydrophobization, anti-efflorescence and surface protection

## MasterPolyheed

Solutions for mid-range concrete

## MasterPozzolith

Solutions for water-reduced concrete

## MasterProtect

Solutions for concrete protection

## MasterRheobuild

Solutions for high strength concrete

## MasterRoc

Solutions for underground construction

## MasterSeal

Solutions for waterproofing and sealing

## MasterSet

Solutions for set control

## MasterSphere

Solutions for guaranteed freeze-thaw resistance

## MasterSuna

Solutions for sand and gravel in concrete

## MasterSure

Solutions for extraordinary workability retention

## MasterTop

Solutions for industrial and commercial floors

## Master X-Seed

Advanced accelerator solutions for concrete

## Ucrete

Flooring solutions for harsh environments



## QUANTIFIED SUSTAINABLE BENEFITS ADVANCED CHEMISTRY BY MASTER BUILDERS SOLUTIONS

Let the numbers do the talking: We have portrayed some of our most eco-efficient product solutions for concrete and precast production, construction, civil engineering, and flooring.

[sustainability.master-builders-solutions.com](https://sustainability.master-builders-solutions.com)



### Master Builders Solutions UK Ltd

Swinton Hall Road, Swinton,

Manchester, M27 4EU

T +44 161 727 6300

[constructionchemicalsinfo@mbcc-group.com](mailto:constructionchemicalsinfo@mbcc-group.com)

[www.master-builders-solutions.com](http://www.master-builders-solutions.com)

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