



REFURBISHMENT TOTAL CORROSION MANAGEMENT OVERVIEW

SIKA TOTAL CORROSION MANAGEMENT SYSTEMS ARE SUITABLE FOR ...

... MANY TYPES OF CONCRETE STRUCTURES

All reinforced concrete structures can suffer from damage and deterioration at some stages during their life span. Reliable Sika Total Corrosion Management Systems encompass an effective range of complete repair and protection solutions.



Infrastructure



Power Plants



Car Parks



Marine



Buildings



Silos

... ALL TYPES OF CORROSION PROBLEMS

The most common causes of steel reinforcement corrosion in concrete are carbonation or chloride ingress with water. Understanding the root cause of this steel corrosion determines the most effective repair and protection strategy. Sika's Total Corrosion Management systems then provide flexibility and choices to select the best and most cost effective solutions.



Chloride induced corrosion from sea water or de-icing salts



Atmospheric carbonation induced corrosion

TOTAL CORROSION MANAGEMENT SYSTEM OVERVIEW

			New Construction		Refurbishment Works		
Product type	Description	Standard	Carbon-ation	Chlorides	Carbon-ation	Chlorides (sea water)	Chlorides (de-icing salts)
Concrete repair	Cementitious mortar systems for protecting reinforcement, patch or full surface concrete repairs, available as normal and high performance or special solutions e.g. lightweight concrete.	EN 1504-3/-7	-	-	xxxx	xx	xx
Protective coatings	Range of water or solvent dispersed protective coatings that can Effectively halt or significantly delay carbonation rates.	EN 1504-2	xxxx	xx	xxxx	xxx	xxx
Hydrophobic impregnations	Range of water dispersed or 100% solids hydrophobic impregnations, reducing water ingress and increasing the concrete resistivity to delay and/or reduce corrosion.	EN 1504-2	-	xxx	xxxx	xxx	xxx
Surface applied corrosion inhibitor	Amino alcohol based inhibitor migrating to the reinforcing bars and forming a protective film around the steel.	Method 11.3 of EN 1504-9	-	xx	xxxx	x	x
Admixture corrosion inhibitor	Range of corrosion inhibitors mixed in the fresh concrete to prevent the onset of corrosion due to chloride ingress.		-	xxxx	-	-	-
Galvanic anodes	Inserted in the patch repairs in order to prevent the formation of incipient anodes and thereby prevent corrosion. Can also be used in new constructions and to control corrosion in contaminated but sound concrete.	EN 12696:2012	-	xx	xx	xxxx	xxxx

Legend: xxxx: Best performance xxx: Very suitable xx: Suitable x: can be considered for short to medium term - : Not suitable

TOTAL CORROSION MANAGEMENT – SIKA'S PRODUCT RANGE

REPAIR MORTARS

	Application Parameters		
	Corrosion Protection	Patch Repair	Spray Repair
SikaTop® Armatec® 110 EpoCem®	xxx	–	–
Sika MonoTop®-910 N	xxx	–	–
Sika MonoTop®-412 N	–	xxx	xxx
Sika MonoTop®-412 NFG	–	xxx	xxx

PROTECTIVE COATINGS

	Aesthetic Parameters			Performance Parameters	
	Color retention*	UV resistance*	Dirt pick up resistance	Crack bridging	Long term performance
Sikagard®-550 W Elastic	xxx	xxx	xx	xxx	xxx
Sikagard®-545 W ElastoFill + Sikagard®-550 W Elastic	xxx	xxx	xx	xxxx	xxx
Sikagard®-675 W ElastoColor	xxx	xxx	xxx	x	xxx
Sikagard®-680 S BetonColor	xxx	xxxx	xxx	–	xxxx
Sikagard®-720 EpoCem®	–	xxx	x	–	xx
SikaTop® Seal-107	xx	xx	x	x	xx
Sikagard® WallCoat T	x	–	xxx	–	xxx
Sikagard®-260 W PU	xxx	xxxx	xxx	–	xxx
Sikagard®-62 + Sikagard®-363	xxx	xxxx	xxx	–	xxx
SikaCor SW-500	x	–	xx	–	xxx
Sikalastic®-152	xx	xx	x	xxx	xx

Legend: xxxx: Best performance xxx: Very suitable xx: Suitable x: can be considered for short to medium term – : Not suitable

Note*: Color retention and UV resistance are dependent on the color, as darker, more intense shades will always have lower UV resistance and color retention.

Usage				
Bridges	Car parks	Buildings	Tunnels	Marine structures
xxx	xx	x	xxx	xxx
xx	xx	xxx	x	x
xx	xx	xxx	xxx	x
xxx	xxx	x	xxx	xxx

	Application Parameters			Usage			
Mechanical cleaning resistance	VOC	Hand application	Machine application	Civil engineered structures	Buildings	Tunnels	Marine structures
-	xxxx	xxxx	xxxx	xxxx	xxxxx	-	xx
-	xxxx	xxxx	xxxx	xxx	xxxxx	-	xx
x	xxxx	xxxx	xxxx	xxx	xxx	x	xx
x	-	xxxx	xxxx	xxxx	xx	x	xx
-	xxx	xxx	xxx	xxx	-	xxx	xx
-	xxxx	xxx	xxx	xxx	xxx	-	xx
xxxx	xx	xxxx	xxx	-	-	xxxx	-
xxxx	xx	xxxx	xxx	-	-	xxxx	-
xx	x	xxx	xxx	xxx	-	-	-
xxx	x	xxx	xxx	-	-	-	xxxx
-	xxxx	xxx	xxx	xx	xxx	-	xx

TOTAL CORROSION MANAGEMENT – SIKA'S PRODUCT RANGE

HYDROPHOBIC IMPREGNATIONS

	Aspect		Performance Parameters				
	Liquid	Thixotropic	Chloride prevention	Penetration behavior	Durability	Corrosion protection	Freeze-thaw resistance
Sikagard®-705 L	✓		xxxx	xxxx	xxxx	xxxx	xxxx
Sikagard®-706 Thixo		✓	xxxx	xxxx	xxxx	xxxx	xxxx
Sikagard®-704 S	✓		xx	xxx	xxx	xx	xx
Sikagard®-740 W	✓		xx	xx	xx	xx	xx
Sikagard®-700 S	✓		x	x	x	-	-

CORROSION INHIBITORS AND GALVANIC ANODES

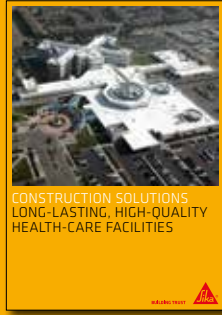
	Product Types			Performance Parameters		
	Galvanic anodes	Surface applied corrosion inhibitor	Concrete admixture corrosion inhibitor	Corrosion prevention and control	Corrosion protection	
					Chloride content % bwc	
<1%	>1%					
Sika® FerroGard® Anodes*	✓	-	-	xxxx	xxxx	xxxx
Sika® FerroGard®-903 Plus	-	✓	-	xx	xx	-
Sika® FerroGard®-901 S	-	-	✓	xxxx	-	-
Sika® FerroGard®-910 CNI	-	-	✓	xxxx	-	-

Legend: xxxx: Best performance xxx: Very suitable xx: Suitable x: can be considered for short to medium term - : Not suitable
 Note*: Depending on the types of anodes used, refer to specific brochures.

Application Parameters				Usage				
V OC	Vertical	Overhead	Horizontal	Bridges	Car parks	Buildings	Tunnels	Marine structures
xx	xx	xx	xxxx	xxxx	xxxx	xxx	xxxx	xxxx
xxx	xxxx	xxxx	x	xxxx	xxxx	xxxx	xxxx	xxxx
-	x	x	xxxx	xx	xxx	-	xx	xx
xxxx	xx	xx	xxxx	x	xx	xxxx	xx	x
-	x	x	xxxx	x	x	x	x	x

Application Parameters			Usage				
New construction	Incipient anodes mitigation	Carbonation induced corrosion	Bridges	Car parks	Buildings	Tunnels	Marine structures
xx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
-	xx	xxxx	x	x	xxx	x	x
xxxx	-	-	xxxx	-	-	-	xx
xxxx	-	-	xx	-	-	-	xxxx

ALSO AVAILABLE FROM SIKA



FOR MORE INFORMATION ON SIKA REFURBISHMENT SYSTEMS AND SOLUTIONS:



WE ARE SIKA

Sika is a specialty chemicals company with a leading position in the development and production of systems and products for bonding, sealing, damping, reinforcing and protecting in the building sector and the motor vehicle industry. Sika's product lines feature concrete admixtures, mortars, sealants and adhesives, structural strengthening systems, flooring as well as roofing and waterproofing systems.

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.



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