



WATER INFRASTRUCTURE SELECTION GUIDE

FUTURE-PROOFING WATER INFRASTRUCTURE, BECAUSE EVERY DROP COUNTS

SIKA OFFERS A FULL RANGE OF SOLUTIONS FOR BUILDING AND REFURBISHING WATER INFRASTRUCTURE

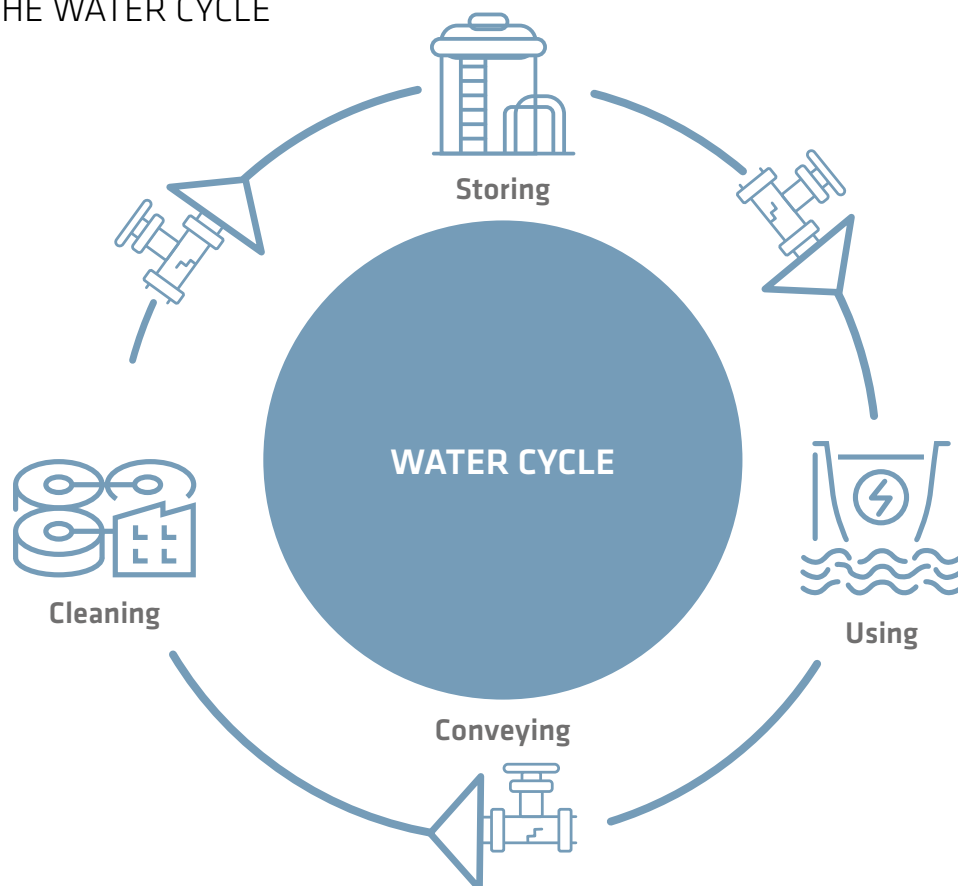
MAIN SEWER NETWORKS



WASTE WATER TREATMENT PLANTS



ALONG THE WATER CYCLE





FOR NEW STRUCTURE AND REFURBISHMENT:

Concrete repair

- Repair mortars
- Grouts
- Anchoring
- Carbon reinforcement

Concrete protection

- Protective coatings
- Cathodic protection

Sealing & Bonding

- Joint sealants

Concrete admixtures

- Water reducing
- Improving finishing
- Improving watertightness
- Increasing resistance abrasion

Waterproofing

- Liquid applied membranes
- Prefab. membranes
- Waterbars
- Waterproofing tapes
- Hydros swelling gaskets

Flooring

- Industrial floors
- Secondary containment

Roofing

- Liquid applied membranes
- Prefab. sheet membranes

Building Finishing

- Renders
- Tiling products

SIKA MAIN SOLUTIONS FOR WATER INFRASTRUCTURES

Products and systems	Short description	Sewers	WWTP
Solutions for concrete repair			
Rebar protection			
Sika® Armatec®-110 EpoCem	Cementitious epoxy slurry	■	■
Sika MonoTop®-1010	Polymer modified slurry	■	■
Concrete repair mortars			
Sika MonoTop®-4012	R4 structural repair mortar with low CO ₂ footprint	■	■
Sika Emaco® S 488	R4 structural repair mortar	■	■
Fast setting repair mortars			
Sika Emaco® S 5440 RS	Fast setting R4 repair mortar	■	■
Repair and reprofiling mortars			
Sika MonoTop®-3020	Fine repair & reprofiling R3 mortar	□	□
Repair mortar with abrasion resistance			
Sika MonoTop®-3400 Abraroc	High hydraulic abrasion resistant mortar	□	□
Injection			
Sikadur®-52/53	Epoxy injection	■	■
SikaInject®-1360	Epoxy injection	■	■
Solutions for osmotic blisters			
Sikagard®-720 EpoCem	Reprofiling and moisture barrier mortar	■	■
Solutions for structural reinforcement			
Sika® CarboDur® system	CFRP system		■
Sika® CarboDur® Grid	Carbon fiber FRCM system for struct. strengthening	■	■
Solutions for concrete protection and waterproofing			
Concrete coating protection - epoxy			
Sikagard®-62 /-62 + mesh	Epoxy coating	■	■
Sikagard®-63 N /-63 N + mesh	Epoxy coating	■	■
Concrete waterproofing coating – cementitious			
SikaTop® Seal-107	Cementitious coating		□
Sikalastic®-1K/-6100 FX	Flexible cementitious coating		□
Concrete coating protection with high BSA resistance			
Sikagard®-7000 CR	Xolutec system	■	■
Sikalastic®-8440 / M 689	PUA membrane		■
Sikalastic®-836 DW / 840 ES	PUA membrane		□
Repair and protection mortars with high BSA resistance			
Sika MonoTop®-4400 MIC	Calcium aluminate mortar	■	■
Sheet membranes			
Sikaplan® WT 4220	FPO sheet membrane		■
Solutions for mechanical scrappers			
Adhesive of steel plates			
Sika® Icosit® 340	Flexible PU resin grout	■	■
Solutions for grouting and anchoring			
Grouting			
Sikagrout®-800	Precision grout with low CO ₂ footprint	■	■

Drinking water		Desalination	
	■		■
	■		■
	■		■
	■		■
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	■		■



SIKA MAIN SOLUTIONS FOR WATER INFRASTRUCTURES

Products and systems	Short description	Sewers	WWTP
Anchoring			
Sika Anchorfix®-2+	Acrylate adhesive	■	■
Sika Anchorfix®-3030	Epoxy adhesive	■	■
Solutions for watertight joints			
Sikadur-Combiflex® SG	FPO waterproofing tape + Epoxy adhesive	■	■
Sikaflex®-403 Tank & Silo	PU joint sealant for WWTP	■	□
Sikaflex® PRO 3 Purform®	Universal PU joint sealant	□	■
Sikaflex® DW	Silicon joint sealant		
Solutions for new construction			
Waterbars			
Sika Waterbar® FB-125	Hybrid waterstop	■	■
Swelling profiles			
Sikaswell® A/S	Hydrophilic profiles & silents	■	■
Concrete admixtures			
Sika® WT 200 P	Concrete admixture waterproofer	■	■

ADDITIONAL SOLUTIONS FOR SERVICE BUILDINGS OF WATER TREATMENT PLANTS AND DESALINATION PLANTS

Products and systems	Short description	Sewers	WWTP
Solutions for roofing			
Sikalastic®	Liquid applied membranes		■
Sikaplan®	Prefabricated membranes		■
Sikashield®	Bituminous membranes		■
Solutions for external concrete protection			
Weather resistant coatings			
Sikagard®-5500	Elastic protective coating		■
Sikagard®-675 W	Protective coating		■
Hydrophobic impregnation			
Sikagard®-740 W / H 303	Silane hydrophobic impregnation		
Corrosion inhibition			
Sika FerroGard®-903 Plus	Surface applied corrosion inhibitor		■
Sikagard®-8500 CI	Surface applied corrosion inhibitor with dual effects		■
Solutions for Building finishing			
Tiling solutions			
SikaCeram®	Tile adhesives		■
SikaCeram®	Tile grouts		■
Facade and walls solutions			
Sikatherm®	Insulation solutions		■
Sikawall®	Levelling and finished of facades		■

Drinking water	Desalination
■	■
■	■
■	■
□	□
□	□
■	
■	■
■	■
■	■



Sika offers a full range of concrete admixtures: Contact the Concrete Sika services for any request

PERFORMANCE TABLE FOR PROTECTIVE COATINGS IN CONTACT WITH DRINKING WATER

Drinking water	Desalination
■	■
■	■
■	■
■	■
■	■
■	■
■	■
■	■
■	■

Exposure	Crystalline	Waterproofing mortars		Multi-layer resins	Hot spray membrane	Sheet membrane
	Sika® WT 200 P	SikaTop®-107 Seal	Sikalastic®-1K	Sikagard®-62	Sikalastic®-840 ES / -836 DW	Sikaplan® WT 4220
Substrate humidity	N/A	Moist	Moist	Dry*	Dry*	Wet
Crack bridging ability	No	No	> 0.5 mm	No, with reinforcement 0.3-0.5 mm	High	Very high
Resistance to soft water	Low	Low	Low	High	High	High
Application thickness	N/A	> 2 mm	> 2 mm	Variable	1.5-2 mm	1.5 mm

*Surface visibly dry during application

SIKA SOLUTIONS FOR WASTE-WATER TREATMENT PLANTS

Selection guide for selecting the concrete protection solution according to the project requirements

Urban W.W.T.P.	Resin Based		
	Epoxy		PUA
SYSTEM	Sikagard®-63 N/-62	Sikagard®-63 N/-62 + mesh	Sikalastic® M 689/8440
BSA resistant	NO	NO	YES
Surface preparation	Sika MonoTop®-3020 SikaTop®-500 Sikagard®-720 EpoCem® Sikagard® P 770 + Sand + Thickener		
SYSTEM 1 (Humidity < 4%)	Sikafloor®-161/-160 Sikagard®-63 N	Sikafloor®-161/-160 Sikafloor®-161 + mesh + Extender Sikagard®-63 N	Sikafloor®-161/-160 Sikalastic® M 689/8440
SYSTEM 2 (No limit of humidity)	Sikagard® P 770* Sikagard®-63 N	Sikagard® P 770* Sikafloor®-161 + mesh + Extender T Sikagard®-63 N	Sikagard® P 770* Sikalastic® M 689/8440
Inflow, primary treatment	No crack bridging		High crack bridging and very fast return to service
Secondary treatment			
Third treatment			
Biogas tanks, sludge treatment, bio reactors	NO	NO	

*Surface visibly dry during application

Biogenic Sulfuric Acid Corrosion occurs mainly in inflow, primary treatment and sometimes in secondary treatment in case of confined areas and covered tanks.

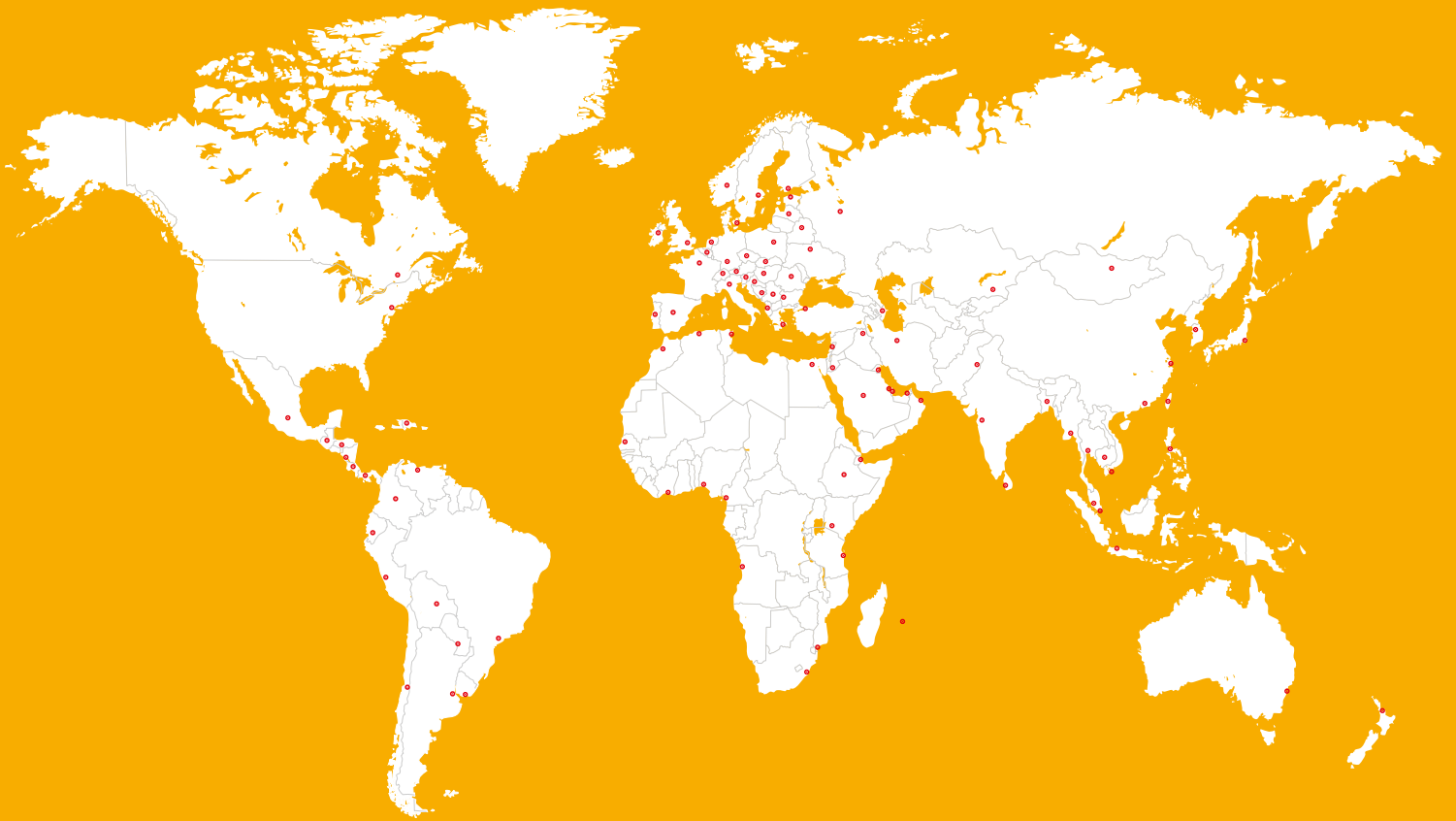
	Hybrid		Cement based
	Xolutec®	EpoCem®	Calcium aluminate
	Sikagard®-7000 CR	Sikagard®-720 EpoCem®	Sika MonoTop®-4400 MIC
	YES	NO	YES
	Sika MonoTop®-3020 SikaTop®-500 Sikagard®-720 EpoCem® Sikagard® P 770 + Sand + Extender T	Sikagard®-720 EpoCem®	Not needed
	Sikagard® P 770* Sikagard® M 790	Sikagard®-720 EpoCem®	Sika MonoTop® 4400 MIC
	Innovative and unique technology	NO	Only when BSA corrosion occurs Application on damp surface Fast re-opening
		Reprofiling + protection in one step (limited durability)	
		Reprofiling + protection in one step	NO
		As reprofiling below coating	If damp substrate in refurbishment of sludge treatment Fast re-opening Not for biogas or bio reactors

DRINKING WATER SYSTEMS

	RIGID WATERPROOFING	SEMI-RIGID WATERPROOFING	FLEXIBLE WATERPROOFING
Main Technology / Type of system	Watertight concrete Sika® WT 200 P	Waterproofing mortar coating SikaTop®-107 Seal/Plus	Waterproofing polymer-modified mortar Sikalastic®-1K / Sikalastic®-6100 FX
Waterproofing concept	Integral waterproofing of reservoir structures, combined with joint sealing	Internal waterproofing lining of reservoir structures, combined with joint sealing	Internal waterproofing lining of reservoir structures, combined with joint sealing
Performance characteristics	■ Crack-bridging: n.a. ■ Water vapour tightness: n.a. ■ Chemical resistance: + ■ Durability: ++	■ Crack-bridging: + ■ Water vapour tightness: + ■ Chemical resistance: + ■ Durability: +	■ Crack-bridging: ++ ■ Water vapour tightness: + ■ Chemical resistance: + ■ Durability: ++
Nature of surface in contact with potable water	Cement based	Cement based	Polymer-modified cement
Substrate conditions	New structures	New and existing structures Reinforced concrete Brickwork	New and existing structures Reinforced concrete Brickwork
Substrate preparation	Controlled conditions for concreting on site required (temperature, e.g.)	Controlled conditions on site required (temperature) Pre-wet substrate	Controlled conditions on site required (temperature) Pre-wet substrate
Repairability of system	Crack and joint repair with Sikadur-Combiflex® system and Sika® Injection	Crack and joint repair with Sikadur-Combiflex®	Local refurbishment of coating Crack and joint repair with Sikadur-Combiflex®
Advantages	■ Very cost effective ■ No protection measures required ■ Simple and fast construction	■ Very cost effective ■ No protection measures required ■ Simple and fast construction	■ Easy detailing solutions ■ No need of reinforcement ■ Moisture tolerant

Liquid applied coating Sikagard®-62 / Sikalastic®-M808		Hot sprayed coating Sikalastic®-836 DW/-840 ES		Loose laid and mechanically fixed membrane Sikaplan® WT 4220	
Internal waterproofing lining of reservoir structures, combined with joint sealing for concrete structures Internal waterproofing lining for steel structures		Internal waterproofing lining of reservoir structures, combined with joint sealing for concrete structures		Internal waterproofing lining of reservoir structures	
Crack-bridging:	++	■ Crack-bridging:	++	■ Crack-bridging:	+++
Water vapour tightness:	++	■ Water vapour tightness:	++	■ Water vapour tightness:	n.a.
Chemical resistance:	++	■ Chemical resistance:	++	■ Chemical resistance:	++
Durability:	++	■ Durability:	++	■ Durability:	+++
Epoxy based/Polyurethane		Polyurea based		Polyethylene based	
New and existing structures Reinforced concrete Steel		New and existing structures Reinforced concrete		New and existing structures Reinforced concrete Brickwork Steel	
Controlled conditions on site required (temperature, dry substrate, low humidity) Substrate preparation required		Controlled conditions on site required (temperature, dry substrate, low humidity) Substrate preparation required		Substrate cleaning required	
Local refurbishment of coating		Local refurbishment of membrane		Local repair of leaks in membrane with welding	
■ Easy detailing solutions ■ Can be reinforced		■ Easy detailing solutions ■ Fast application		■ Very limited substrate preparation ■ Fast installation procedure by trained personel	

GLOBAL BUT LOCAL PARTNERSHIP



FOR MORE INFORMATION:



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, industrial 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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