



SIKA SOLUTION FOR WATER INDUSTRY

Potable Water Tank, Reservoir, Wastewater Treatment Tank

BUILDING TRUST





WATERPROOFING SOLUTIONS FOR POTABLE WATER RESERVOIRS

VARIOUS INTERNAL WATERPROOFING SYSTEMS that are in direct contact with potable water must fulfill stringent requirements regarding hygiene, durability, exposure and stress conditions, construction method and sequence, ease of application and total cost management. This is required as potable water, out of all natural resources, is our most essential foodstuff. Potable water, stored in reservoirs, need to be protected to stay clean. Water reservoirs and tanks must therefore be watertight and must fulfill demands of long service life.

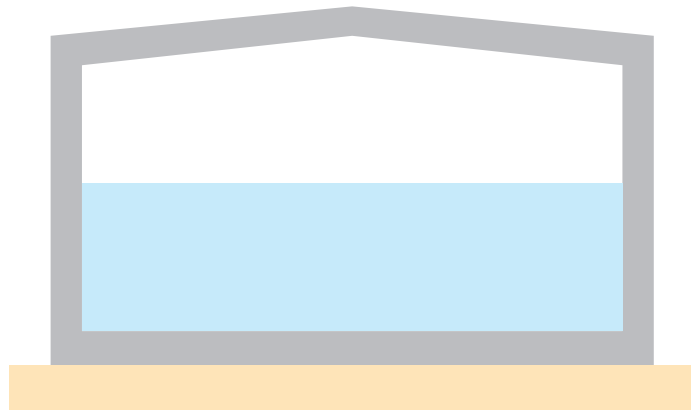
Sika's expertise is combined with more than 100 years of experience from all around the world in the successful waterproofing of water retaining structures. Sika waterproofing experts are able to our customers throughout

their projects, from initially determining the best waterproofing concept, to the detailed design and site support for successful installation and completion on site, including remedial solutions for any existing structures.



TYPES OF WATER RESERVOIRS

ABOVE GROUND

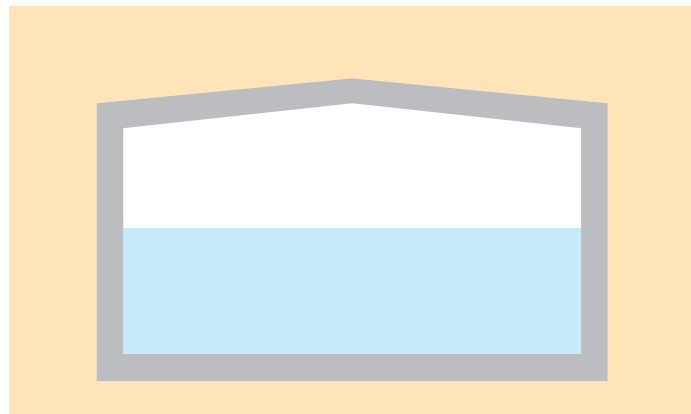


Tanks

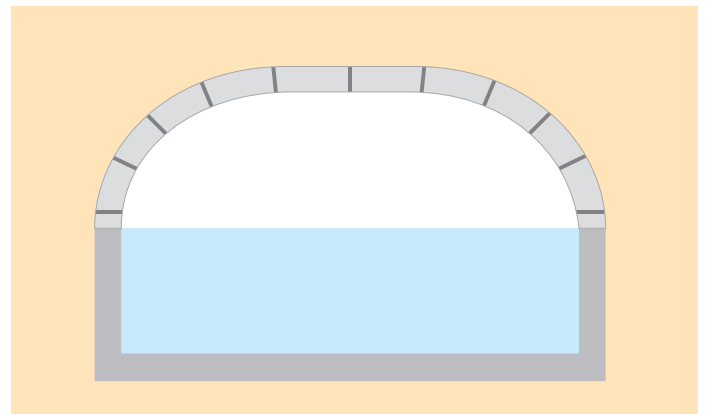


Towers

BELOW GROUND



Tanks



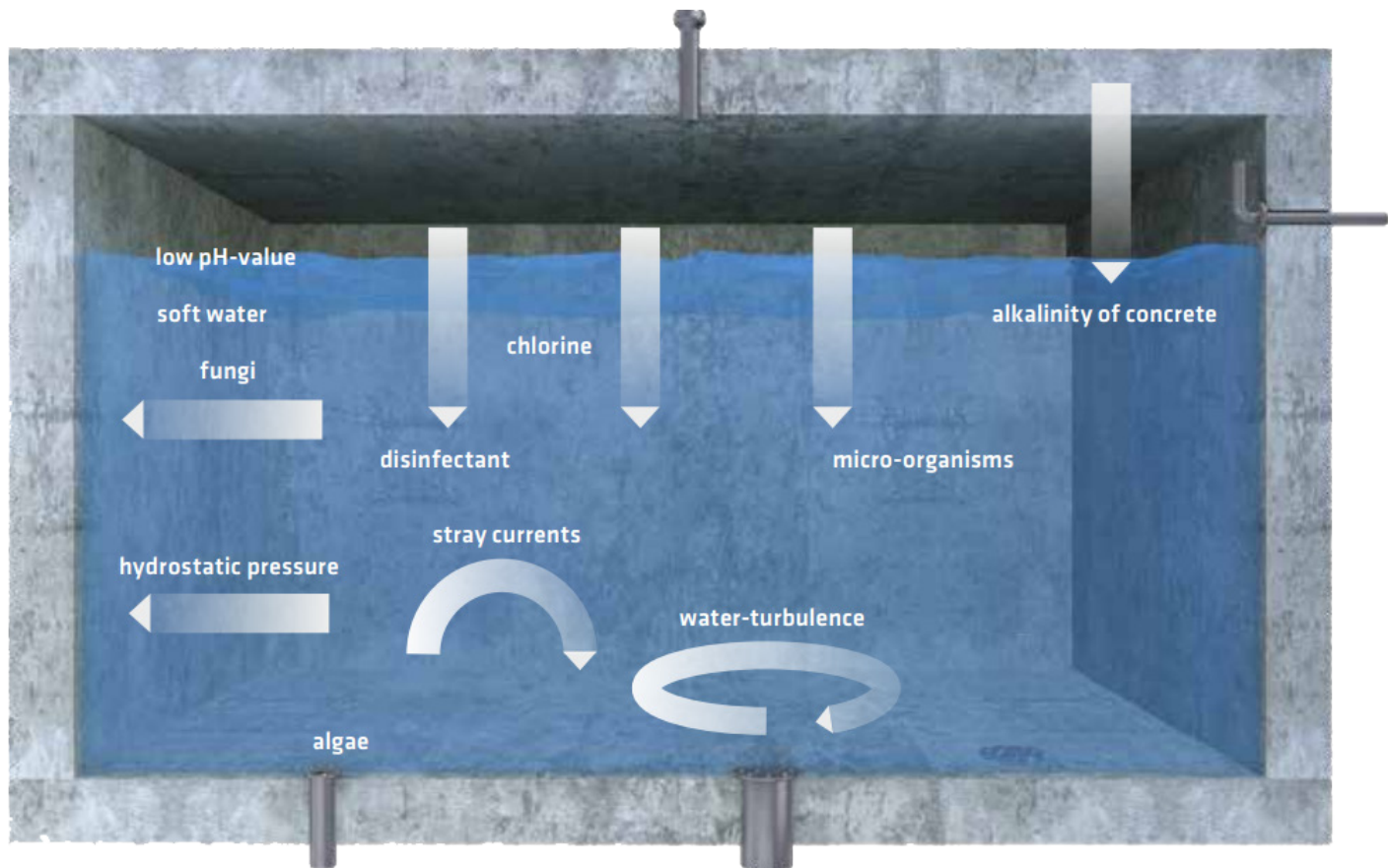
Caverns

New or existing tanks and reservoirs to store potable waters are made of concrete or steel structures built above ground or below ground. Water towers in flat country sides or caverns in mountainous areas at elevated levels secure hydraulic pressure in water supply pipe network.

Depending to local requirements for water-holding structures and local water quality conditions, the type of waterproofing for reservoir can be rigid by cementitious products like structural concrete or mortar layers, or flexible by liquid applied layers of reactive resins combined with joint sealing systems, including on steel substrates, or also

EXPOSURES AND STRESS

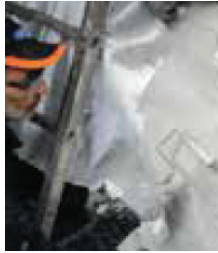
EXPOSURES IN POTABLE WATER RESERVOIRS



Depending on water sources, potable waters in various regions differ in quality, referring to content of minerals, pH value, water temperature conditions and treatments of waters with chemicals. Water-holding structures, such as water reservoirs and water treatment facilities, mainly made of reinforced concrete or steel structures, are exposed to various influences :

- Low pH value, as well as soft water, attack cementitious substrates.
- Temperature variations may cause crack in concrete.
- Stray currents may accelerate hydrolytic corrosion.
- Chlorine treatment and disinfectants of water to keep the water clean.
- Alkalinity of concrete may influence the pH value of water.
- Micro-organisms, algae and fungi may influence the water hygiene.
- Water turbulence request solutions to prevent washing out effects.

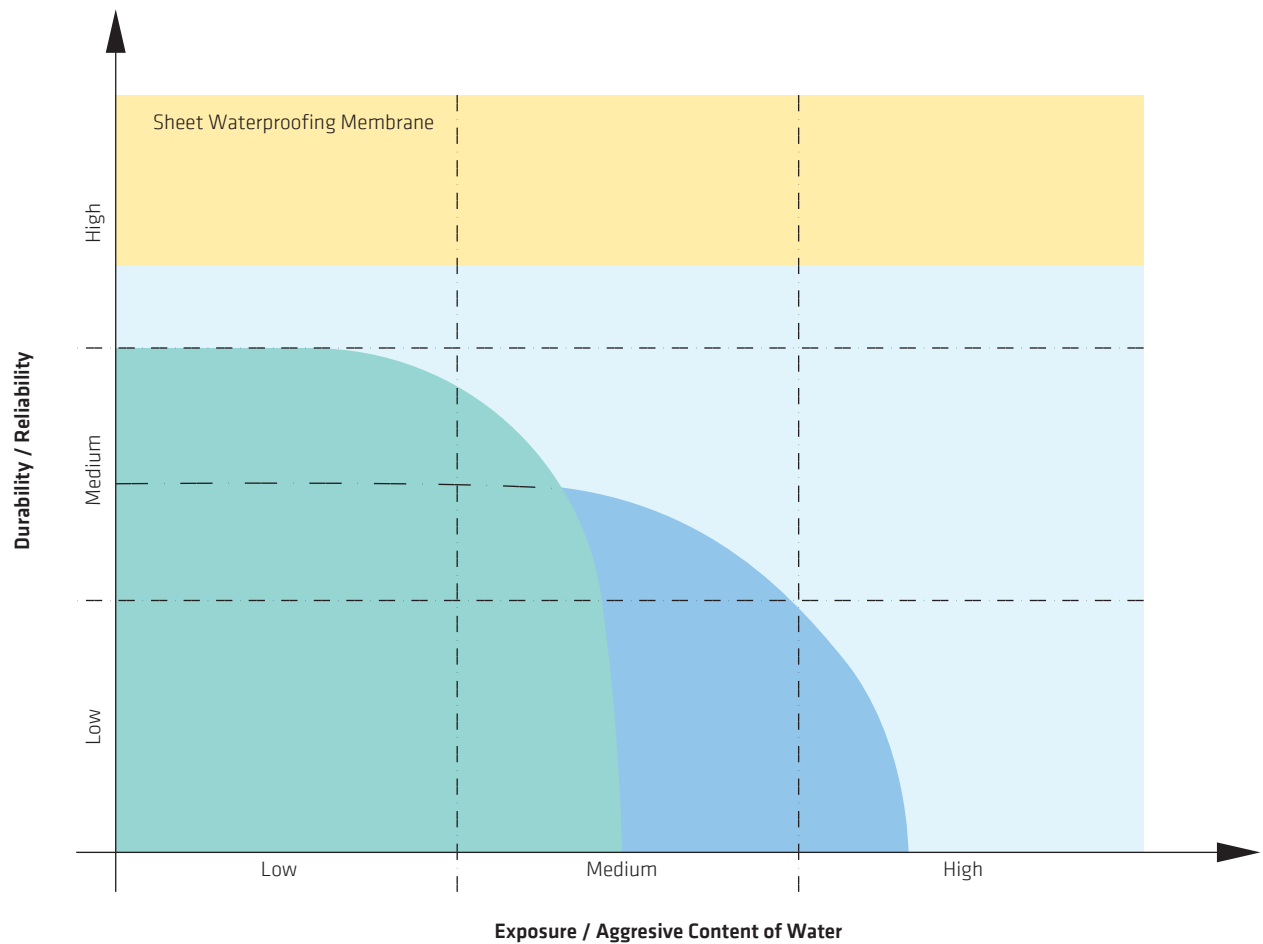
IMPACTS ON VARIOUS TECHNOLOGIES

Exposure	Technology				
	Concrete	Mortar	Epoxy Coating	Polyurea Coating	FPO Membrane
					
Substrate moisture					
Cracked substrate					
Alkalinity of concrete					
Disinfectants					
Fungicide					
Chlorine treatment					
Ozone treatment					
Soft (desalinated) water					
Low pH-value					
Sunlight					
Water temp. ≤ 60° C					
Negative water pressure					
Water turbulences					
Cleanability					

Not Critical
 Additional Measures Needed
 Critical



PERFORMANCE OF DIFFERENT WATERPROOFING TECHNOLOGIES



Durability

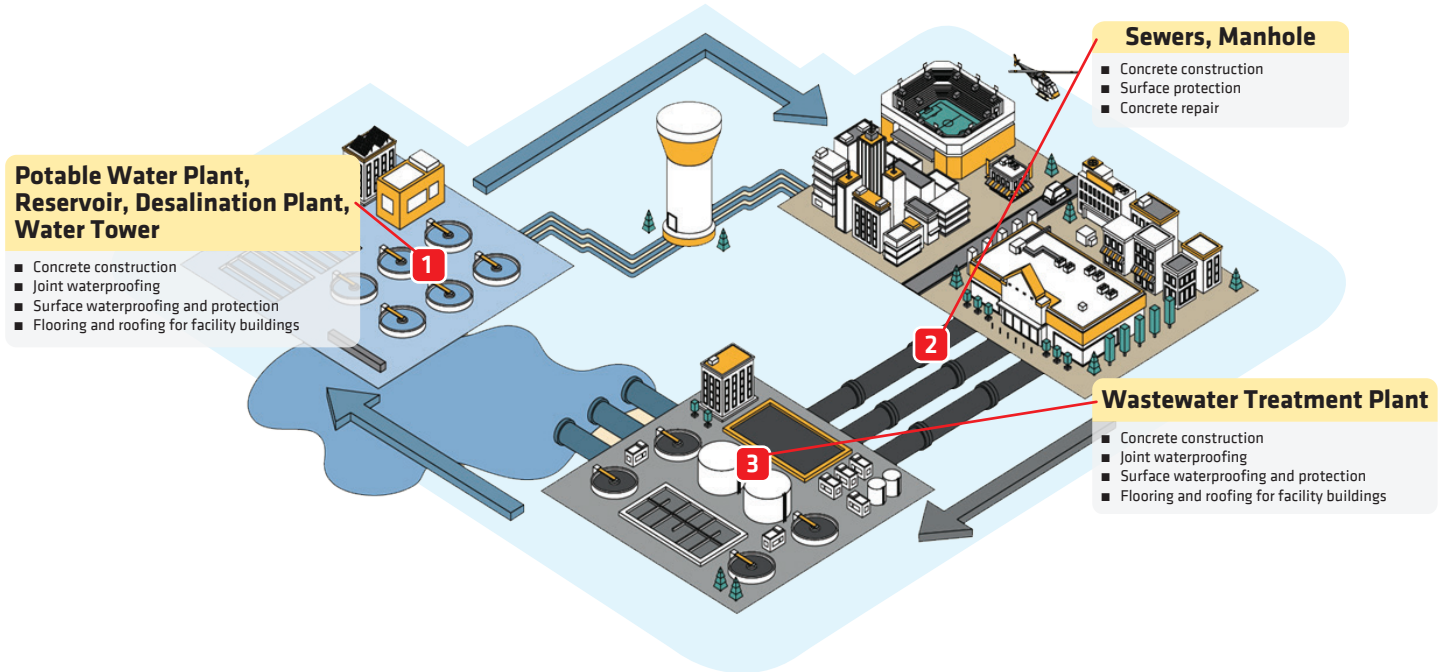
Low : up to 10 years
 Medium : 10 - 20 years
 High : > 20 years / refurbishment required

Exposure / Aggressive Content of Water

Low : water turbulences only
 Medium : low pH-value, algae, no temperature variations
 High : soft water, high temperatures



POTABLE WATER TANK, RESERVOIR, WASTEWATER TREATMENT TANK



1 POTABLE WATER PLANT, RESERVOIRS & DESALINATION PLANT

CONCRETE CONSTRUCTION (For All Construction)

- **Sika® Viscocrete® 3115 N** - Superplasticisers for reduced porosity and improved durability
- **SikaControl®-210 WT CWA** - Crystalline Waterproofing Concrete Admixture
- **Sika® WT-110 M-id** - Integral waterproofing admixture for improved water tightness
- **Sika® Antisol® S / E-125** - Curing compounds

SURFACE WATERPROOFING & PROTECTION

- **SikagROUT® 215 New / FM** - Cement based for repair and grouting
- **SikaTOP®-107 Plus** - Semi flexible cement based waterproofing
- **SikaTOP®-109 Elasto** - High crack bridging capability, cementitious solutions for non-expose, with drinking water approval
- **Sikagard®-62** - Rigid and flexible protective epoxy coating multi-layer systems with drinking water approval
*Temporary Moisture Barrier : **Sikagard®-720 EpoCem®**
- **Sikagard® 7000 CR** - Protection and Waterproofing for extreme wastewater facilities conditions
- **Sikalastic®-871 JW** - Hot-spray applied polyurea waterproofing membranes, versatile, seamless and fast application

JOINT WATERPROOFING

- **Sika® Waterbar®** - Thermoplastic joint profiles based on PVC
- **SikaSwell® S-2** - Swellable sealant
- **Sikadur® Combiflex® SG System** - Tapes for construction and movement joints
- **Sika® Hydrotite CJ 0725** - Hydrophilic strip; swell when contact with water

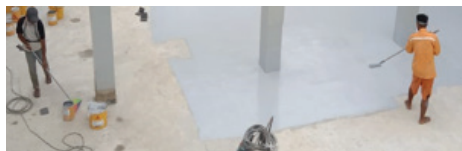
WATERPROOFING, FLOORING & ROOFING FOR FACILITY BUILDINGS

- The **SikaFloor®** range provides various resin floor solutions based on epoxy i.e. **SikaFloor®-2530 W**, **SikaFloor®-263 SL HC/264 HC** and Polyurethane i.e. **SikaFloor®-20 PurCem®**, **SikaFloor®-21 PurCem®** for durable, clean and chemically resistant floors
*Temporary moisture barrier, levelling mortar : **SikaFloor®-81 EpoCem®**
- **Sarnafil® S 327/G 410 Felt**, **SikaShield® P24 MG** and **Sikalastic®-590** - Solutions for all facility roofs (Expose Roof)
For Waterproofing Basement (External) :
- **SikaProof®-808** - Pre-applied fully bonded membranes for basements
- **Sikalastic®-110** - Liquid applied membranes, modified bituminous polyurethane for external waterproofing
- **SikaShield® W159 ED 1.5mm** - Self adhesive modified bituminous membrane

PROJECT REFERENCES :



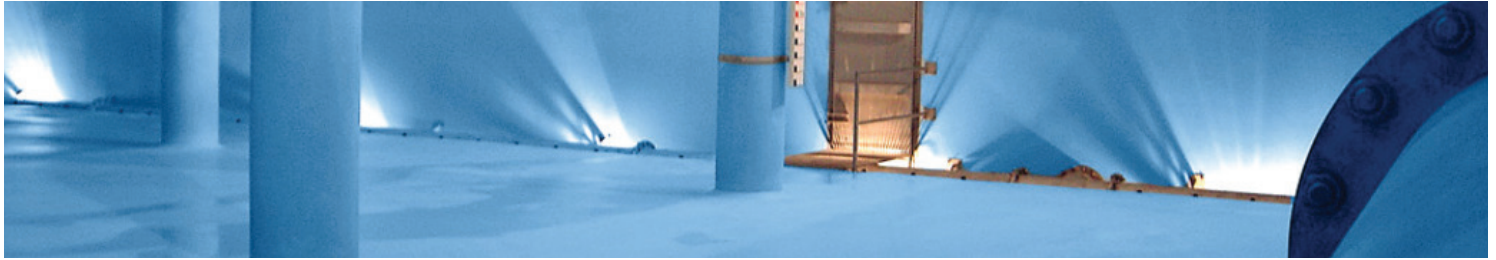
Potable watertank on Bali



Ground water tank, PIK Jakarta



SPAM 1000 LD, Pekanbaru



2 SEWERS, MANHOLE

CONCRETE CONSTRUCTION (For All Construction)

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- **SikaControl®-210 WT CWA** - Crystalline Waterproofing Concrete Admixture
- **Sika® WT-110 M-id** - Integral waterproofing admixture for improved water tightness
- **Sika® Antisol® S / E-125** - Curing compounds

CONCRETE REPAIR

- **Sika® MonoTop®** - Rebar protection and concrete repair solutions, conforming to the repair and protection concepts of EN 1504
- **Sika® Injection** - Range for crack repair in concrete and masonry structures

PROJECT REFERENCES :

Factory - Kediri, Kolam / Bak Penampungan



3 WASTEWATER TREATMENT PLANT

SURFACE WATERPROOFING & PROTECTION

- **SikaGrout® 215 New / FM** - Cement based for repair and grouting
- **SikaTop® 109 Elasto** - High crack bridging capability, cementitious solutions for non-expose, only for open tanks
- **Sikagard® 63N ID** - Rigid and flexible protective epoxy coating multi-layer systems, which can be combined with **Sika® Reemat®** for durable and crack-bridging waterproofing and protection layers
*Temporary Moisture Barrier : **Sikagard®-720 EpoCem®** - Hybrid repair and leveling layers, combining the benefits of both cementitious and epoxy products, providing a durable and moisture tolerant protection layer.
- **Sikagard® 7000 CR** - Protection and Waterproofing for extreme wastewater facilities conditions
- **Sikalastic® 871 JW** - Hot-spray applied polyurea waterproofing membranes, versatile, seamless and fast application, for confined digester / biogas tanks and open tanks for industrial waste.

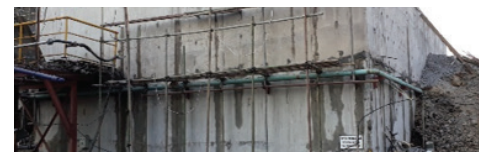
PROJECT REFERENCES :



Sikagard®-720 EpoCem®
Moisture Barrier, followed
by Sikagard®-63N ID Protective Coating



Repair works to R.C Tanks.
Hot Well and Cooling Tower
with Sikagard®-63N ID



Factory - Sidoarjo, Jawa Timur
Sikagard®-720 EpoCem®
Sikagard®-63N ID RAL 7032

SURFACE WATERPROOFING & PROTECTION

- **Sika® MonoTop®** - Repair and leveling mortars, with high abrasion resistance in harsh environments
- **Sikagard® 63N ID** - Rigid and flexible protective coating multi-layer systems epoxy based for manholes
*Temporary Moisture Barrier : **Sikagard®720 EpoCem®**
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GLOBAL BUT LOCAL PARTNERSHIP



WHO WE ARE

Sika is a globally active specialty chemicals company. Sika supplies the building and construction industry as well as manufacturing industries (automotive, bus, truck, rail, solar and wind power plants, facade). Sika is a leader in processing materials used in sealing, bonding, damping, reinforcing and protecting load-bearing structures. Sika's product lines feature high quality concrete admixtures, specialty mortars, sealants and adhesive, damping and reinforcing materials, 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 uses

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