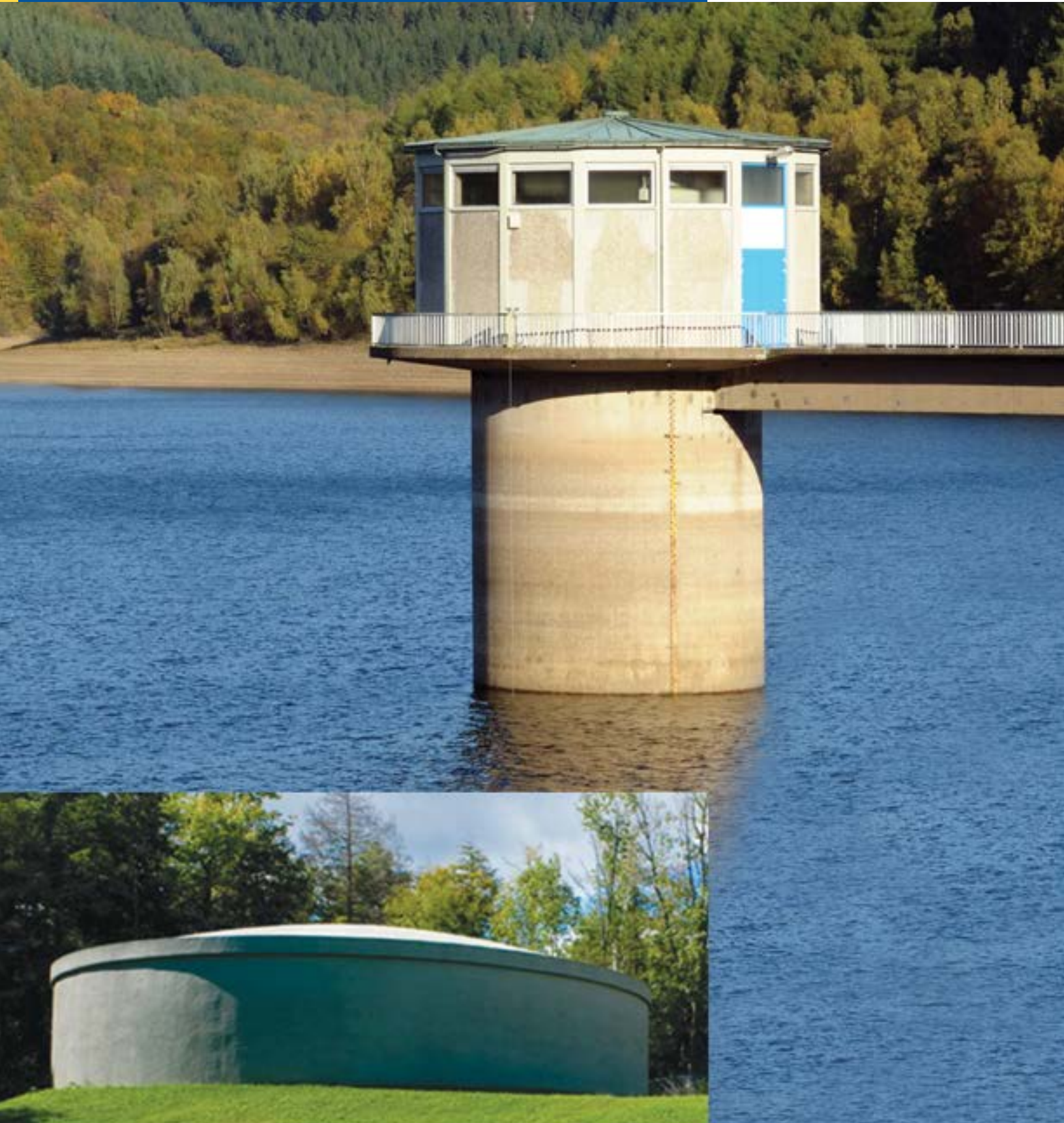


# Water Treatment Facilities



Delivering Tomorrow's Technology Today™

# Cem-Kote™ Flex ST - System Overview

Cem-Kote Flex ST is a highly flexible, polymer modified cement membrane, easily applied by brushing, or using spray equipment for larger areas. Cem-Kote Flex ST is certified under ANSI/NSF 61 Standard for Potable Water, and is used for the waterproofing of water treatment facilities, in new construction and restoration. The key advantages of Cem-Kote Flex ST are its flexibility, excellent adhesion, crack bridging, and easy application on wet (even water saturated) concrete. Since Cem-Kote Flex ST is breathable, it allows substrate moisture to escape, and can be used on both - negative & positive side. Reinforcing Fabric HD provides spanning & waterproofing of larger, moving cracks. Cem-Kote Flex ST has an excellent ozone resistance (which epoxy coatings lack), and tanks can be filled with water after only 3 (three) days of air dry curing (competition requires 7-10 days). Cem-Kote Flex ST system offers many advantages over epoxy or polyurethane, and is becoming a favorite of many leading specifiers.

## Benefits & Advantages of Cem-Kote FLEX ST

Characteristic	Cem-Kote FLEX ST	Polymer Coatings
Flexibility	<b>Highly Flexible</b> Spans up to 1/16" (1.6 mm)	<b>Non-flexible</b>
Sensitivity to moisture	<b>Insensitive</b>	<b>Highly sensitive</b> - debond when applied to moist concrete - drying (especially in restoration) is virtually impossible & very expensive
Breathability	<b>Breathable</b>	<b>Non-breathable</b> - debond when water vapour (penetrating from behind) condenses at the polymer/concrete interface
Capillary pressure at the interface	<b>Unaffected</b>	<b>Problem</b> - debond due to capillary pressure at the interface of polymer coating and concrete
Negative side water pressure	<b>Unaffected</b>	<b>Debond</b> - due to capillary pressure at the polymer coating & concrete interface
Ease of application	<b>Easy application</b>	<b>Slow &amp; Expensive</b> - applying very "sticky" materials is difficult & laborious
Cleanability of tools	<b>Easy to clean with water</b>	<b>Expensive &amp; Difficult</b> - flammable solvents must be used (difficult to dispose of)
Toxicity / VOC	<b>Non-toxic + No VOC</b>	<b>Toxic</b> - components (curatives) could be carcinogenic <b>VOC</b> - dependant on product & manufacturer
Cost + Application Cycle	<b>Economical + Quick Application</b>	<b>Very High Cost + Long Application Time</b> - Especially when levelling coat and/or drying are required
Life Span	<b>Long - Over 25 years in-place performance</b>	<b>Limited</b> - polymer coatings often fail (reasons listed above)

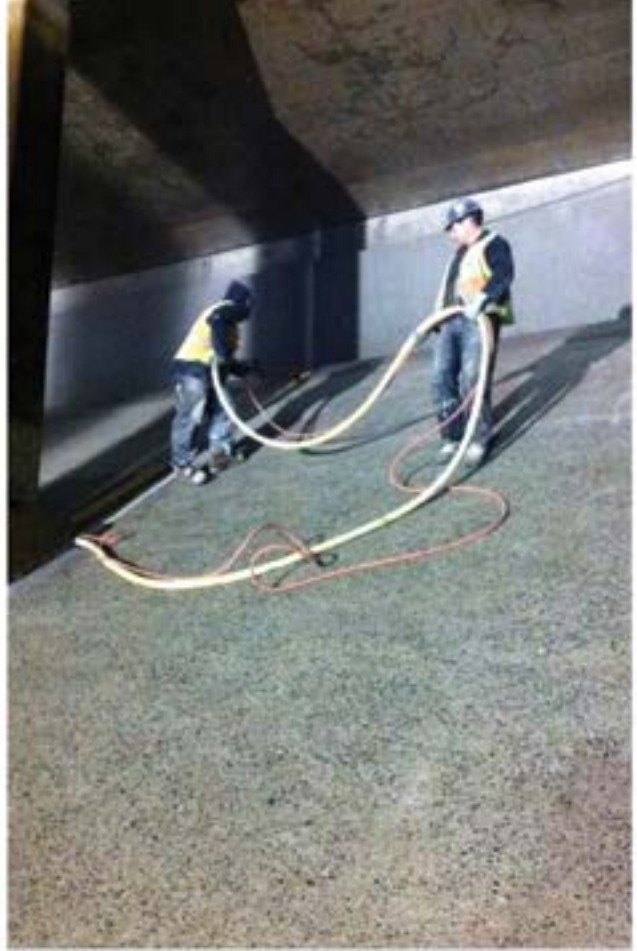
Problems	Solutions
Surface Preparation	ICRI - CSP 3 using high-pressure water min. 5000 psi (34.4 MPa) or light sandblast
Rough (eroded) surface + Bug-holes	Level with <b>Gem-Plast TC</b> - hand trowel, or spray & trowel
Crack Treatment	<b>Cem-Kote Flex ST + Reinforcing Fabric HD</b>
Repair of Deteriorated Concrete	<b>Gem-Plast TC</b> up to 1/2" (12 mm), or <b>Fibre-Patch OV</b> when thicker layers
Corroded Reinforcing Steel	Treat with <b>Fibre-Prime</b> corrosion protective coating
Active Water Leaks	<b>Fibre-Patch WP</b> (water plug), or injection. Water must be stopped for a min. 3 days before Cem-Kote Flex ST application
Corner Treatment	Build 2" (50 mm) cove using <b>Fibre-Patch OV</b> . Apply <b>Reinforcing Fabric HD</b> embedded between 2 coats of <b>Cem-Kote Flex ST</b>



**Cem-Kote Flex ST** and Reinforcing Fabric HD applied over a high number of cracks in the beam, Guelph, Ontario, Canada



**Cem-Kote Flex ST** in restoration and waterproofing of Whaley WTP, Vancouver, British Columbia, Canada



Spraying **Cem-Kote Flex ST**, Whaley WTP, Vancouver, British Columbia, Canada



**Cem-Kote Flex ST** used to restore and waterproof WTP in Calarasi, Romania



Installation of **Cem-Kote Flex ST** with Reinforced Fabric HD throughout (entire surface), Kingsford, Ontario, Canada



**Cem-Kote Flex ST** spray and brush application, Streetsville, Ontario, Canada



Spraying of **Gem-Plast TC** to repair and level deteriorated concrete surface, Niagara, Ontario, Canada



Horizontal and vertical covers using Fibre-Patch OV, **Cem-Kote Flex ST** and Reinforcing Fabric HD, Brantford, Ontario, Canada



**Cem-Kote Flex ST** applied to walls and slab, Herridge WTP, Mississauga, Ontario, Canada



**Cem-Kote Flex ST** with Reinforcing Fabric HD to provide long term crack bridging, Mississauga, Ontario, Canada

# Solving Waterproofing Challenges Worldwide

Gemite draws upon many decades of practical experience to assist the Architect, Engineer and Contractor in finding the Permanent Solutions. From the Condition Analysis of existing structures, to continuous support during the Design and Specification process, we provide advice to assure that the best and most cost efficient systems are selected.

## GLOBAL AVAILABILITY AND SUPPORT

Gemite materials are available internationally, ensuring consistent quality and service to customers everywhere. Gemite guarantees a Single Source of Environmentally Responsible Materials, applied by well-trained Professional Applicators, and supported by a Global Technical Network.



## ESTABLISHED AND FIELD PROVEN TECHNOLOGY

Gemite material systems have been used in new construction and restoration projects ranging from small to huge. We have an international track record of successful installations for over 25 years around the globe, from the ravages of the Sahara to the colds of Alaska.

## WORLDWIDE TECHNOLOGY LEADER

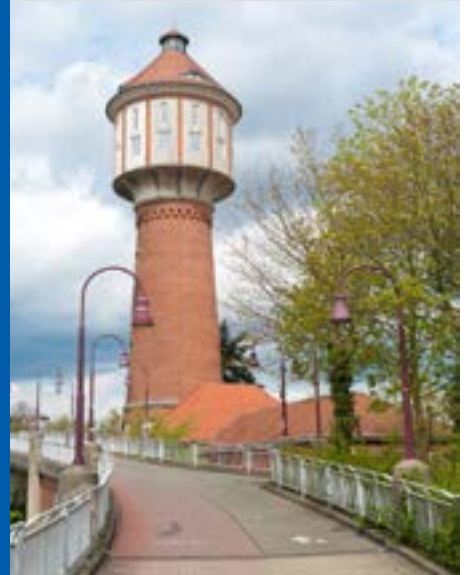
Our continuous Innovation, Superior Quality and Solid Reputation make Gemite the preferred industry choice for lasting and reliable solutions. The latest technology introduced by Gemite is a Nano group of products.

## LEED, GREEN AND SAFE

Gemite supports the LEED Green concept and strives to maximize sustainability and environmental health by using materials with the lowest possible carbon footprint. Gemite's constant improvement of operating procedures and strict Quality Control according to its ISO 9001 Certification assures that we deliver materials with consistent quality and performance to our global Customers.



Cem-Kote restoration and waterproofing of water tower, Josefov, Czech Republic



Fibre-Prime and Cem-Kote Flex ST - water tower, Romania



Cem-Kote Flex ST - water treatment facility, Daejeon, Republic of Korea



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### Brochures for following markets are available on request:

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- Wastewater Treatment
- Crystalline Waterproofing
- Bridges
- Parking Garages
- Wall and Roof Coatings
- Industrial Concrete
- Dams and Locks
- Tunnels
- Marine Structures
- Cooling Towers
- Airports
- Chemical Protection of Concrete
- Carbon Fibre Reinforcement
- Sewers and Manholes



## Associated Companies Worldwide