

CRYSTALLINE SYSTEM

CRYSTALLINE WATERPROOFING TECHNOLOGY

SMART

WATERPROOFING SYSTEM

CRYSTARM
SMART WATERPROOFING SYSTEM

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CRYSTARM CRYSTALLINE®

THE HIGHEST PROTECTION FOR HIGHEST SAFETY

PREVENTING CORROSION

FREEZE-THAW DAMAGE SCALING AND OTHER PROBLEMS.

Ensure highest protection to extend concrete's life. Using an integrated waterproofing solution increases the longevity of the concrete and decreases permeability. CRYSTARM technology always contributes in the elimination of a variety of possible concerns that might substantially harm and damage the structure.

Concrete failure caused by :

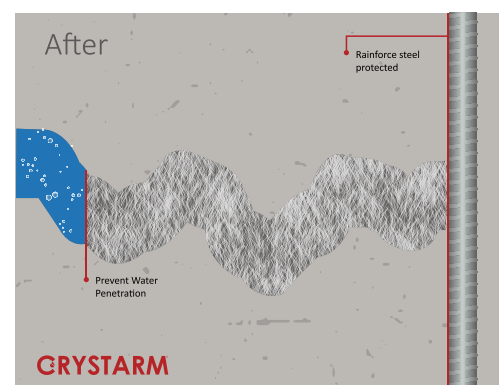
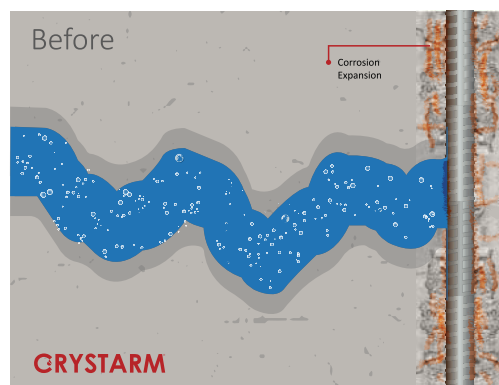
- Corrosion of the reinforcement steel due to water penetration.
- Repeated freezing and thawing cycles cause damage
- Alkali-silica reactions (ASR).
- Numerous aggressive substances, such as chlorides, sulfates and acids, that attack the concrete.
- Damage from concrete scaling.



Self-healing

As part of the CRYSTARM technology, concrete has the ability to self-heal microcracks up to 0.5mm throughout the course of its service life. There is no need for additional treatment or aftercare.

CRYSTARM products mixed into the concrete and chemically interacts with water and unhydrated concrete particles to produce needle-shaped crystals that close capillary holes and microcracks in the concrete, blocking water and waterborne pollutants from passing through.



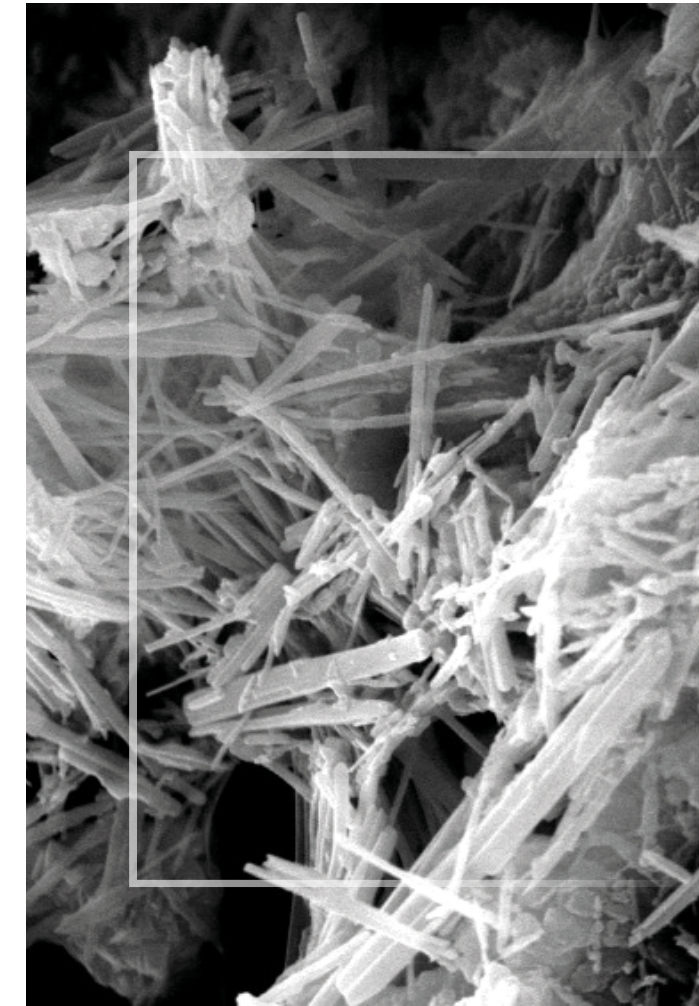
DELIVERABLES OF CRYSTARM®

- Provide Protection to the concrete 2x Times
- Time is saved.
- Comparatively less expensive than other systems.
- Provides the occupant with the largest amount of useable area.
- Protect people's lives.



ADVANTAGES

- Apply to moist & green concrete.
- applied to Positive or negative side.
- Provides concrete with the ability to self-heal.
- No polymers are found in inorganic materials.
- Increases the compressive strength of concrete.
- CRYSTARM becomes a part of the concrete itself.
- Potable water applications classified as non-toxic.
- High hydrostatic pressure is not a challenge anymore.
- Seals hairline and shrinkage cracks up to prevent further damage.
- Damaged surfaces do not affect waterproofing or chemical resistance.
- Steel is protected by CRYSTARM technology reinforcing steel and wire mesh.
- In the long run, membranes and clay - panel systems are more effective and less expensive.
- Chemical assault and freeze/thaw cycles as well as seawater, carbonates, chlorides and nitrates are not a problem anymore.



APPLICATIONS

such as wastewater treatment plants, parking garages, nuclear reactors, storage facilities, mass transit tunnels and basements have shown the efficiency and productivity of the CRYSTARM System.

To prevent cracks, cavities, and fissures, CRYSTARM crystalline materials can be used to both new and existing concrete buildings. Our products are non-toxic and free of volatile organic compounds (VOCs). They meet the latest environmental and ecological requirements.



INTEGRAL WATERPROOFING ADMIXTURE BY CRYSTALLIZATION TECHNOLOGY.

CRYST ADMIXTURE®



CRYST ADMIXTURE® is a concentrate crystalline waterproofing admixture for concrete specifically formulated to protect concrete in-depth and reinforcing steel against corrosion. When CRYST ADMIXTURE® is mixed with the concrete at the time of batching reacts with cement that provides permanent waterproofing concrete by forming nanocrystals that seal the capillary pores and cracks in the concrete structures. These nanocrystals are active for the life of the concrete to prevent any further water ingress. CRYST ADMIXTURE® is designed to provide durability to concrete by protecting it against corrosion of reinforcing steel and aggressive chemicals. With CRYST ADMIXTURE® the concrete is permanently waterproofed for positive and negative water pressures, even under high hydrostatic pressure.

FEATURE AND BENEFITS

- No VOCs.
- Environmentally friendly.
- Improves durability of concrete.
- Improves workability and strength.
- Reduces construction scheduling time.
- Protects against concrete carbonation.
- Suitable with other concrete admixtures.
- Non-toxic – ideal for potable water tanks.
- Protection of the reinforced steel from corrosion.
- Significant decrease in water absorption by capillaries.
- Does not tear, puncture or delaminate as membranes can.

APPLICATION

Uses for all types of waterproofing and concrete corrosion protection in :

- Marine structures.
- Water containment: water tanks.
- Precast, and shotcrete applications.

- Replaces the use of unreliable exterior membranes, liners and coatings.
- Protects against water, chloride, sulfate ingress, and chemical attack.
- Added to the mix during the batching process, so it's not affected by weather conditions.
- Active crystallization to seal cracks up to 0.5mm wide, even if they appear after the setting of concrete.
- Effective against extreme hydrostatic pressure from either the positive or negative surface of the concrete.
- Permanently waterproof and active throughout the life (longevity) of the structure, thus it prevents water from penetrating the building.

- Bridges, dams, and highway infrastructure.
- Swimming pools, decks, bathrooms, and garages.
- Tunnels, subway systems and below-grade concrete pipelines.
- Below grade: parking structures, basements, elevator pits, and foundations of towers.
- Waste treatment Facilities: reservoirs, water treatment tanks, sewage, and manholes.

CRYST SLURRY®



CRYST SLURRY® is a concrete surface applied that becomes an integral part of concrete through a crystallization process, which waterproofs and protects concrete in-depth. CRYST SLURRY® designed to penetrate deeply into the substrate and claws by active crystallization into the pores of the substrate to achieve high protection to the concrete against seawater,

wastewater, and many other aggressive chemicals. CRYST SLURRY® retains the crystallizing reaction over the whole working time.

FEATURE AND BENEFITS

- Environmentally friendly.
- Allows concrete to breathe.
- Does not require a dry surface.
- Applied to old or new concrete.
- Improves durability of concrete.
- No membrane to tear or puncture.
- Protects against concrete carbonation.
- Non-toxic – ideal for potable water tanks.
- Increases concrete's compressive strength.
- Protects reinforcing steel against corrosion.
- Becomes an integral permanent waterproofing.
- Active crystallization to seal cracks up to 0.5mm wide.
- Protects against water, chloride, sulfate ingress, and chemical attack.
- Penetrates deeply and seals concrete's capillary tracts and shrinkage cracks.
- Effective against extreme hydrostatic pressure from either positive or negative surface of the concrete.

APPLICATION

Uses for all types of waterproofing and concrete corrosion protection in :

- Swimming pools, decks, bathrooms, garages, and exteriors.
- Marine structures, bridges, dams, and highway infrastructure.
- Tunnels, subway systems, and below-grade concrete pipelines.
- Water containment: water tanks, Water towers, and storage tanks.
- Below grade: basements, elevator pits, parking structures, and foundations towers.
- Waste Treatment Facilities: reservoirs, water treatment tanks, sewage, and manholes.

CRYST SLURRY® is available in 20 kg bags or pails.



CRYST DRY SHAKE®



CRYST DRY-SHAKE® is a crystalline waterproofing dry-shake, specifically designed for treatments on horizontal concrete surfaces of freshly laid concrete such as parking decks and floor slabs that require increased impact and abrasion resistance. CRYST DRY-SHAKE® becomes an integral part of concrete through

a crystallization process, which waterproofs and protects concrete in-depth, addressing the problems that are typically connected with coatings such as scaling, dusting, flaking, and delamination. When CRYST DRY-SHAKE® is applied to the concrete surface the active materials react with water and the cement to form nanocrystals. These crystals fill the pores and cracks in the concrete to block any ingress of water (even under pressure).

FEATURE AND BENEFITS

- No VOCs.
- Environmentally friendly.
- Allows concrete to breathe.
- Improves durability of concrete.
- Can be used in food processing plants.
- Protects against concrete carbonation.
- Reduces construction scheduling time.
- Non-toxic – ideal for potable water tanks.
- Effective against extreme hydrostatic pressure.
- Becomes an integral permanent waterproofing.
- Active crystallization to seal cracks up to 0.5mm wide.
- Protects against water, chloride, sulfate ingress, and chemical attack.

APPLICATION

Uses for all types of waterproofing and concrete corrosion protection in :

- Power stations.
- Foundation Slabs.
- Parking Structures.
- Warehouse Floors.
- Below-grade Structures.
- Traffic Bearing Surfaces.

CRYST DRY-SHAKE® is available in 20 kg pails.