

CRYSTARM[®]

SMART WATERPROOFING SYSTEM



THE SMART WATERPROOFING SYSTEM
INTEGRAL WATERPROOFING AND PROTECTION FOR CONCRETE

www.crystarm.com

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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 :

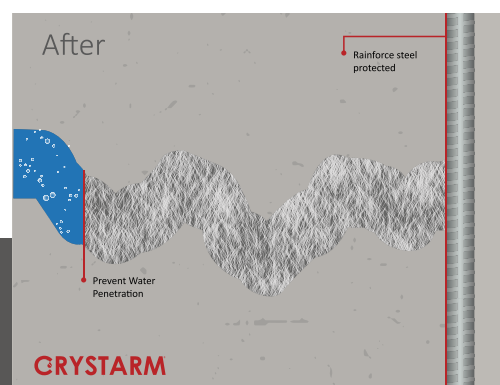
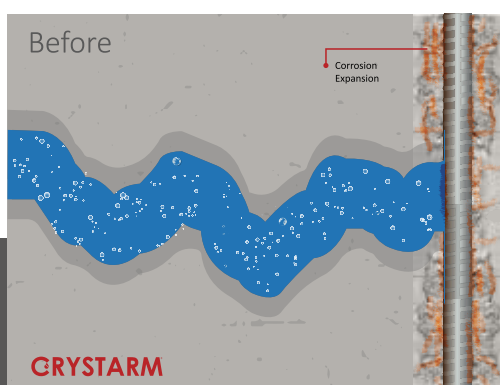
- Corrosion of the reinforcement steel due to water penetration.
- Repeated freezing and thawing cycles cause damage
- Alkali-silica reactions (ASR).
- Numerous aggressive substances, such as chlorides, sulfates and acids, that attack the concrete.
- Damage from concrete scaling.



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.

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.



IMPROVING CONCRETE PERFORMANCE

Permeability to water, carbon dioxide, chloride, sulfates, and other potentially hazardous chemicals is a critical factor in concrete durability. To demonstrate how CRYSTARM increases durability by minimizing hazardous chemicals entry into concrete, consider the following scenarios.

Self-healing properties

CRYSTARM technology is a hydrophilic substance that forms crystals in cracks and gaps when it interacts with moisture and concrete minerals. Concrete has a permanent self-healing capability. Consequently, CRYSTARM technology creates new crystal forms that seal newly generated micro-cracks whenever additional moisture enters.

Permeability

While an adequate W/C ratio is important for obtaining the required total concrete performance, permeability is important for concrete durability: lower permeability implies the higher durability. CRYSTARM technology minimizes shrinkage cracking and closes microcracks. It offers self-healing fractures (up to 0.5mm) throughout the duration of the structure's service life.

Steel Corrosion

Corrosion is a chemical process that happens when the electrical potentials of steel and the cement matrix differ. One of the most critical components of concrete durability is chloride-induced corrosion of steel. Concrete treated with CRYSTARM results in significant decreases in quick chloride permeability tests.

Sulfate attack

The Sulfate attack is often took place when dissolved sulfate-containing water penetrate the concrete. The resulting reaction alters and modify the chemistry and microstructure of the concrete. Significant cracking and a loss of bond between the cement paste and aggregate are among these changes, which result in an internal expansive force. Nowadays, any concrete treated with CRYSTARM and exposed to a sodium sulfate solution shows no change in length due to such expansion.

Carbonation

When carbon dioxide reacts with calcium hydroxide in the concrete to form calcium carbonates, CO₂ dilutes into carbonic acid; this attacks the concrete and reduces its alkalinity. CRYSTARM seals capillaries and cracks to increase the carbonation resistance and protect embedded steel.

Strength of concrete

According to the concrete's design strength, CRYSTARM technology can improve compressive strength of concrete.

Alkali silica reaction ASR

Aggregates susceptible to alkali attacks (Na₂O and KOH) from cement or other sources create an expansion response that cracks and disrupts the aggregate's structure. An alkali-reactive aggregate and/or alkali-rich cement are the most common causes of concrete damage. As a result, ASR is prevented by using CRYSTARM.

Freeze / thaw

Frozen-thawed cycles are a primary cause of concrete deteriorating in cold regions (bridges, roads, etc.). Freezing causes internal pressure, which leads to cracking. Then, thawing allows water to infiltrate further into newly created cracks, spreading again and inflicting additional damage and the cycle continues. Freeze-thaw cycles have been disappear when treated with CRYSTARM technology.

Acid resistance

When subjected to acid attack, some projects may experience dissolution of the concrete matrix resulted in a loss of structural integrity. CRYSTARM provides protection against chemical attack (pH 3-11). It is preferred and commonly used solution for wastewater treatment plants.



ATTENTION TO DETAILS LEADS THE **SUCCESS**

How our materials are tested and what the results mean for your project.

The innovation of new products

Each of our CRYSTARM'S products is subjected to rigorous on-site and scientific testing to ensure reliability of the results and improved performance. In order to maintain a high level of quality and performance.

Field of expertise

Using the latest generation of materials analysis from specialized testing facilities and practical inputs from constructions experts in the field of waterproofing, CRYSTARM formulas are always continually refined and improved.



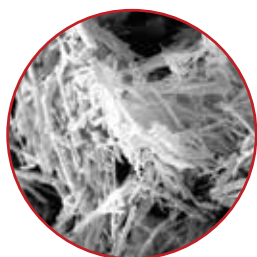


SOLUTIONS FOR REAL-WORLD CONCERNS

Our System will Protect Your Concrete

For a larger issue.

Needle-shaped Crystals is needed. most effective concrete waterproofing and durability improving solutions. Crystalline solution is required because water and waterborne pollutants permeate concrete primarily through capillary absorption and hydrostatic pressure. It took several years to develop and polish our CRYSTARM crystalline waterproofing technology. Our scores are proof of our accomplishments.



CRYSTARM REACTIONS

Our 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.

Throughout the concrete's lifespan, any excess moisture will cause crystallization self-healing, providing total waterproofing.

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.



CRYSTARM CRYSTALLINE®

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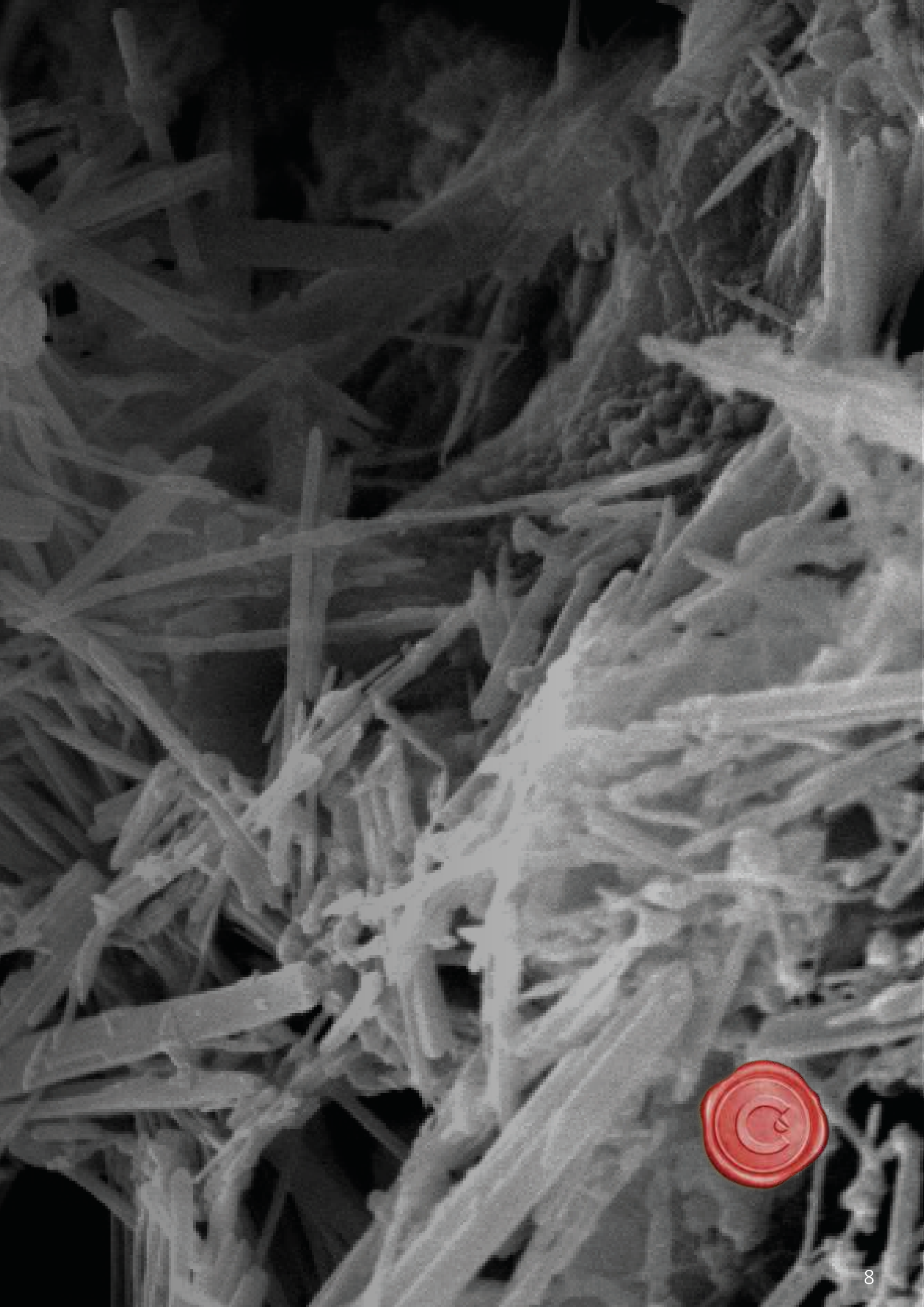
CRYST ADMIXTURE®

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CRYST SLURRY®

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CRYST DRY-SHAKE®



CRYST ADMIXTURE®

INTEGRAL WATERPROOFING ADMIXTURE BY CRYSTALLIZATION TECHNOLOGY



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.
- Protects against water, chloride, sulfate ingress, and liners and coatings.
- Replaces the use of unreliable exterior membranes, 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.

APPLICATION

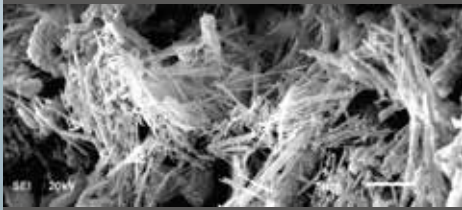
Used for all types of waterproofing and concrete corrosion protection in :

- Marine structures.
- Water containment: water tanks.
- Precast, and shotcrete applications.
- 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 ADMIXTURE® is available in 20 kg bags or pails.



CRYSTARM active ingredients reacts with concrete components to generate insoluble crystals fill in voids, pores and cracks up to 0.5 mm. The picture shows a magnification 5,000x of treated concrete with CRYST ADMIXTURE.



Crystal magnification 5,000x



CRYST SLURRY®

WATERPROOFING SLURRY FOR NEW & EXISTING CONCRETE BY CRYSTALLIZATION TECHNOLOGY



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

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

- Marine structures, bridges, dams, and highway infrastructure.
- Swimming pools, decks, bathrooms, garages, and exteriors.
- 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®

DRY-SHAKE FOR HORIZONTAL SURFACE BY BY CRYSTALLIZATION TECHNOLOGY



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

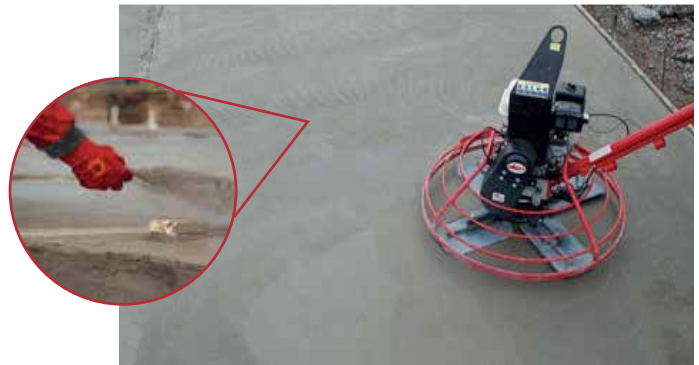
- No VOCs.
- Environmentally friendly.
- Allows concrete to breathe.
- Improves durability of concrete.
- Reduces construction scheduling time.
- Protects against concrete carbonation.
- Can be used in food processing plants.
- Non-toxic – ideal for potable water tanks.
- Effective against extreme hydrostatic 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.
- Warehouse Floors.
- Below-grade Structures.
- Traffic Bearing Surfaces.

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





CRYSTARM REPAIR®

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CRYST MORTAR®

WATERPROOFING MORTAR BY CRYSTALLIZATION TECHNOLOGY



CRYST MORTAR® is a high-strength concrete replacement mortar that is impermeable to pressurized water by crystalline waterproofing technology which is used to repair damaged areas of concrete, cracks, joints, tie holes, and honeycombed areas. CRYST MORTAR® contains active materials to protect concrete against water, chloride, sulfate ingress, and any other chemical attack.

FEATURE AND BENEFITS

- Fast setting.
- Ready mix dry mortar.
- Environmentally friendly.
- Resistance to chemical attack.
- Non-shrink and crack resistant.
- Non-toxic – ideal for potable water.
- Can be skim coated or feather-edged.
- High-strength fine structure repair mortar.
- Breathable, compatible with host concrete.
- Protects reinforcing steel against corrosion.
- Suitable for internal and external applications.
- Ideal for vertical and overhead concrete repairs.
- Active crystallization to seal cracks up to 0.5mm wide.
- Resist hydrostatic pressure from either positive or negative surface of the concrete.
- A single component that is easy to use needs only to be mixed with water before application.

APPLICATION

Used for repairing concrete structures, cracks, construction joints, tie holes, honeycombed concrete, large-scale repairs, masonry repairs, voids greater than 100 mm deep, and other defects in concrete.

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





CRYST PLUG®

CRYSTALLINE WATERPROOFING PLUG MORTAR



CRYST PLUG® is a fast-setting cementitious mortar containing crystalline technology and special additives, which is designed to stop active water leaks in seconds. CRYST PLUG® can be used internally or externally as plugging leaks or rapid setting repair mortar with a high early compressive strength to prevent water ingress into buildings or concrete structures such as tunnels, tanks, shafts, manholes, and similar.

FEATURE AND BENEFITS

- No VOCs.
- Environmentally friendly.
- Allows concrete to breathe.
- Non-toxic - ideal for potable water.
- Will set up and harden underwater.
- Provides a permanent watertight seal.
- Fast setting within approximately 60 seconds.
- Ability to seal hairline cracks up to 0.5mm wide.
- Resist hydrostatic pressure from either the positive or negative surface of the concrete.
- A single component that is easy to use – needs only to be mixed with water prior to application.

APPLICATION

- Repair the rock pockets leaks.
- Provides impervious, non-shrinking seal to prevent leakage around pipes, conduits, sanitary equipment, and anchoring of bolts.
- Used to stop active water leaks or seepage under pressure through holes, joints, tie rods, cracks in concrete or masonry walls, swimming pools, water storage facilities, tunnels, fountains, cisterns, water channels, ponds, pipes, basements, foundations, retaining walls and any defects in concrete.

CRYST PLUG® is available in 15 Kg pails.

CRYST GROUT®

WATERPROOFING GROUT BY CRYSTALLIZATION TECHNOLOGY



CRYST GROUT® is crystalline waterproofing grout, ready-to-use, non-shrinkable, free-flowing, non-metallic, chloride-free, and high strength for grouting and anchoring applications. As well as it is effective at various consistencies from extremely fluid to dry pack by simply adjusting the quantity of mixing water, and need not be confined in order to develop full strength.

FEATURE AND BENEFITS

- Fast setting.
- Environmentally friendly.
- Resistance to chemical attack.
- Non-toxic - ideal for potable water tanks.
- High bond strength to steel and concrete.
- Protects reinforcing steel against corrosion.
- Flowable consistency - ensures complete filling.
- Non-shrink crack-resistant - Hardens free of bleeding.
- High strength - provides good early and ultimate strengths.
- A single component that is easy to use – needs only to be mixed with water prior to application.
- Resist hydrostatic pressure from either the positive or negative surface of the concrete.
- Active crystallization to seal cracks up to 0.5mm wide, even if they appear after the setting of concrete.

APPLICATION

- Pile head treatment.
- Bridge bearing applications.
- Use for general purpose grouting.
- Structural grouting of beams and columns.
- Filling cavities, voids, big gaps and recesses.
- Factories, refineries, chemical industries, etc.
- Heavy machinery or equipment setting bases.
- Repairing track and runway concrete pavements.
- Installation of manhole frames and Precast wall panels.
- Non-shrink repairs and protection from corrosion effect.
- Screws, connection bolts anchoring, and anchoring of signposts.

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





CRYST SEAL®

HIGH PERFORMANCE POLYURETHANE JOINT SEALANT



CRYST SEAL® is One Component joint sealant/adhesive based on polyurethane moisture curing, elastic sealing compound, Anti-bacterial, High movement, medium modulus, low VOC, UV resistant, heavy rain resistant, high performance, Joint paintable and trafficable Sealant. CRYST SEAL® suitable for movement and connection joints for indoor and outdoor applications. CRYST SEAL® design for weather-resistant sealant with versatile usage both as a sealant and a general adhesive in the construction industry for various substrates, including concrete, steel, wood, and many others.

FEATURE AND BENEFITS

- Non-sag and non-staining.
- High mechanical performance.
- Easy application using a caulking gun.
- Excellent movement accommodation.
- No crack or craze under UV exposure.
- Excellent adhesion to the most substrate.
- High bond strength to steel and concrete.
- Ideal to be sealant and adhesive at same time.
- Permanent elasticity under all climate conditions.
- Good chemical resistance as diluted acids and alkalis.
- Weather-resistant, suitable for external & internal applications.
- When cured it forms a waterproof and durable seal.
- It does not require a primer and exhibits tenacious adhesion to most building materials.
- Paintable with non-solvent or water-based paints after curing in static joints (i.e., around door perimeters).

APPLICATION

- Perimeter caulking windows, doors, and panels.
- Sealing precast and panel walls joints / expansion joints.
- Sealing dynamically moving joints such as expansion and control joints.
- General elastic adhesive for materials with dissimilar properties and thermal expansion coefficients.
- Movement and static joint sealing in most building material including concrete, glass, wood, stone, metal, and anodized aluminum.

CRYST SEAL® is available in 600 ml sausages.





CRYST STOPEX®

WATER STOP SET WITHIN SECONDS



CRYST STOPEX® is a cementitious mortar water stop, that reacts within seconds after contact with water and set. It is mineral-based and catalytically accelerated. It contains special additives that cause the highly reactive process within seconds. CRYST STOPEX® can be used internally or externally as immediate sealing of water ingress in concrete and masonry. The STOPEX mortar adheres to almost all untreated, wet mineral substrates.

FEATURE AND BENEFITS

- No VOCs.
- Permeant watertight.
- Non-shrink, crack resistant.
- Open for water vapor diffusion.
- Non-toxic - ideal for potable water.
- Will set up and harden under water.
- Very fast setting after contact with water in approximately 30 seconds.
- Resist hydrostatic pressure from either the positive or negative surface of the concrete.
- A single component that is easy to use – needs only to be mixed with water prior to application.

APPLICATION

Typical areas of application are water leaks in swimming pools, water tanks, tunnels, basements, underground car parks, sewage plants, elevator shafts, dams, and wherever flowing water must be stopped immediately.

CRYST STOPEX® is available in 15 Kg pails.

CRYST SELF-LEVELING®

SELF-LEVELING FLOOR SURFACE



CRYST SELF-LEVELING® is a single-component, cement-based, polymer-modified, smooth-flowing, economical, pumpable, fast-setting floor self-leveling underlayment used for repairing, leveling, and coating concrete surfaces. as well as used for profile-oriented maintenance, and cosmetic repair of damaged spots on concrete. When mixed with water it forms a very fluid and flowing mixture, perfectly leveling, with easy application, and good adhesion to the support. CRYST SELF-LEVELING® applied in thicknesses between 3 and 25 mm, giving a super flat finish ready to receive final floor coverings including tiles, carpets, resinous flooring systems, parquet, ...etc.

FEATURE AND BENEFITS

- Highly durable.
- Moisture resistant.
- Rapid high strength gain.
- Environmentally friendly.
- Crack and shrink resistant.
- Excellent bonding strength.
- Reduced sound transmission.
- Ready to use with addition of water.
- Ready for limited foot traffic in four hours.
- Easy to place by pump or manual application.
- Highly fluid for pumped or poured application.
- Contains zero volatile organic content and is safe for use both outdoors and in confined indoor spaces.

APPLICATION

CRYST SELF-LEVELING® can be used internally as screed on concrete for existing floors or under the tiles, carpets, resinous flooring systems, parquet, or other types of floors laying.

- Showrooms.
- Public utilities.
- Rain-damaged slabs.
- Parking garage floors.
- Convention hall floors.
- Distressed and worn concrete floors.
- Distribution centers and warehouses.
- Floors are designed to meet a specific flatness.
- Aisleways, manufacturing, storage, and shipping.

CRYST SELF-LEVELING® is available in 20 kg bags or pails.





CRYST SELF-LEVELING PLUS®

WATER STOP SETS WITHIN SECONDS



CRYST SELF-LEVELING PLUS® is a high-strength, single component, fast setting, polymer modified cementitious floor self-leveling and repair mix for interior concrete, and cementitious substrates. CRYST SELF-LEVELING PLUS® specially design for thickness more than 2 cm up to 10 cm. Once mixed, it will form a trawlable screed mortar, with easy application, and good adhesion to the substrates. CRYST SELF-LEVELING PLUS® provides a smooth, level surface finish ready to receive a variety of floor coverings.

FEATURE AND BENEFITS

- Good workability.
- Moisture resistant.
- Environmentally friendly.
- Crack and shrink resistant.
- High compressive strength.
- Reduced sound transmission.
- Ready to use with addition of water.
- Excellent bonding strength to the substrate.
- Excellent physical and mechanical properties.
- Safe for use both outdoors and in confined indoor spaces.
- Easy application enabling high productivity & superior finishing.

APPLICATION

- Public utilities.
- Parking garage floors.
- Industrials floor slabs.
- Distressed and worn concrete floors.
- Distribution centers and warehouses.
- Showrooms and convention hall floors.
- Floors designed to meet a specific flatness.
- Aisleways, manufacturing, storage and shipping.
- Screeding over hollow-core pre-cast concrete slabs.
- Leveling floors and slabs to slope to ensure proper flow to drains.

CRYST SELF-LEVELING PLUS® is available in 20 kg bags or pails.

CRYST BOND®

HIGH PERFORMANCE POLYURETHANE JOINT SEALANT



CRYST BOND® is a high solid aqueous dispersion of styrene acrylic Co-Polymer in liquid form. The dispersion contains an anionic emulsifier system & is free from film forming aids, APEO, solvents, and plasticizers. CRYST BOND® specially designed for universal use such as a high strength admixture, curing agent, and bonding agent for cement mortar and concrete. It provides excellent resistance to impact, abrasion, hydrolysis, moisture and attack by acids or other water-soluble chemicals. As a polymer modifier, it provides improved cement hydration and bonding properties that allow for applications as thin as a feather edge.

FEATURE AND BENEFITS

- High solid content.
- Corrosion inhibiting.
- It is free of fillers and polyvinyl acetate.
- Minimizes cracking and Resists moisture.
- Suitable for use on damp and dry concrete.
- Single component liquid can be easily used.
- Ideal use for internal and external application.
- Multipurpose polymer for waterproofing and repair.
- Improved tensile and flexural properties allow thin applications.
- Improves strength, cohesion, workability, and bond to concrete, masonry, stonework, plaster, and cement boards.
- Improves mortars to provide waterproof repairs, renders and toppings which are highly resistant to freeze/thaw cycling.

APPLICATION

Suitable for use on all interior and exterior applications and to improving the physical properties of cementitious mix. Typical uses include, but are not limited to, the following :

- Admixture for cement sand mixes.
- Primer for porous or non-porous substrates.
- Curing membrane, ready to receive further cementitious renders by re-priming.
- As two-components for Waterproof renders and cementitious waterproofing membranes it lead to make the slurry flexible.
- Bonding agent between multiple lifts of self-leveling, screeds, concrete, slip bricks, ceramic tiles, plasters, renders, cementitious repair materials, and fair-faced concrete.

CRYST BOND® is available in 5 litter, or 20 liter container.





**TO
THE
HORIZON**

**AND
BEYOND**

CRYST TILE ADHESIVE HD®

HEAVY-DUTY TILE ADHESIVE FOR INDOOR AND OUTDOOR APPLICATIONS



CRYST TILE ADHESIVE HD® is a waterproofing ready-to-use, high-performance, and heavy-duty tile adhesive for permanent fixing inside and outside buildings with superior vertical anti-slip. CRYST TILE ADHESIVE HD® is highly-deformable and has excellent flexibility for marble, porcelain, ceramic tiles, and stone material on wall and floor tiles. is designed to be applied on a variety of substrates such as concrete, render, brickwork, blockwork, gyprock, plasterboard, and fiber cement surfaces. CRYST TILE ADHESIVE HD® is ideally suited for tiles in swimming pools and wet areas such as showers, bathrooms, kitchens, etc.

FEATURE AND BENEFITS

- Excellent flexibility.
- Extended open time.
- Environmentally friendly.
- Inside and outside building.
- Good vertical Slip application.
- Easy to use that just add water on site.
- Water resistant and exceptional performance.
- All common substrates and tile-on-tile applications.
- High adhesive bond strength that suitable for larger and heavy tiles.
- All types of tiles: Marble, porcelain, ceramic, stone, granite and tiling corridors.
- Suitable to fix tiles on various substrates including low porosity substrates such as: Heated floors, Existing tiles, power floated concrete, Concrete, screed, Lightweight blocks, stone, walls, cementitious plaster. and renders, gypsum board.

APPLICATION

- For indoor and outdoor use.
- Roofs, stairs, rooms, balconies, terraces, parking, laboratories, hospitals, and heated floors, canteens, etc.
- Suitable for critical applications such as swimming pools, wet areas, cold storage depots, modular manufacture, showers, bathrooms and domestic kitchens.

CRYST TILE ADHESIVE HD® is available in 20 kg bags.





CRYST ADHESIVE HD®

HEAVY DUTY ADHESIVE & SEALANT



CRYST ADHESIVE HD® is a one-component, high-grade adhesive and sealant that instantly bonds, fixes, and seals a wide variety of heavy building materials inside and outside buildings. It is weather and aging-resistant, waterproof, Eco-friendly, Solvent-free, water-based, Over-paintable, and low shrinkage.

FEATURE AND BENEFITS

- Interior and exterior application.
- Heavy-Duty adhesive and high initial tack.
- Wet area Sealant and Works on wet surfaces.
- Anti-bacterial and anti-fungal for sanitary ware.
- Excellent primerless adhesion to numerous porous and nonporous substrates.
- Flexible bonding, fast curing, gap-bridging, sound and vibration damping, correctable for a few minutes, and Moisture-reactive curing.

APPLICATION

- Filling and connecting joints between tiles, ceramic, porcelain, and sanitary ware.
- Sealing and bonding of multiple absorbent and non-absorbent substrates compatible including natural stone, ceramic, concrete, metal, hardboard, plasterboard, plywood, MDF, wood, UPVC, glass, plastics, painted surfaces, Mirrors etc.

CRYST ADHESIVE HD® is available in 300 ml cartridge.

CRYSTARM INJECT®

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CRYST INJECT FOAM®

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CRYST INJECT MULTI®

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CRYST INJECT RESIN®



CRYST INJECT FOAM®

FLEXIBLE POLYURETHANE INJECTION FOAM FOR FAST AND PERMANENT WATERTIGHT SOLUTION



CRYST INJECT FOAM® is a flexible, water-reactive polyurethane injection foam system designed to be fast foaming resin, which is used as a water stopper permanently against strong water flow. CRYST INJECT FOAM® is typically used to repair cracks or failed joints in concrete structures, and tunneling to seal fractures in rock formations. Component B serves as a catalyst and adjusts the reaction time. A lower dosage leads to a prolongation of the reaction time. In contact with minimal amounts of water, CRYST INJECT FOAM® reacts very fast to foam with closed cellular pores and shape-retaining hard flexible PU foam. After curing the material does not shrink due to wet/dry cycles. CRYST INJECT FOAM® has excellent penetrates deep in fine cracks to seal water and moist cracks permanently, making a watertight system.

FEATURE AND BENEFITS

- Ideal for potable water.
- Stops pressurized water.
- Reaction time adjustable.
- Phthalate plasticizer-free.
- Good chemical resistance.
- Permanent watertight solution.
- Used as a one-component system.
- Reacts only in contact with water and humidity.
- Shape-retaining does not shrink after curing.
- Low viscous that can penetrate deep in fine cracks.
- High volume expansion within a few seconds is more than 30.
- Long processing time when a mixed component is kept in closed condition.
- Excellent adhesion to wet surfaces on mineral building materials, rocks, metal, and certain plastics.

APPLICATION

CRYST INJECT FOAM® is recommended to stop strong water flow in cracks, big gaps, voids, and joints for concrete structures, brickwork, and natural and artificial stonework.

Typical areas of application are e.g., tunnels, basements, diaphragm walls, manholes, elevator pits, reservoirs, sewage tanks, water tanks, pools, soil stabilization, etc.

CRYST INJECT FOAM® is available in :
Component A (Resin): 20 ltr metal canister.
Component B (Catalyst): 2 ltr metal canister.





CRYST INJECT MULTI®

2 in 1 MULTI POLYURETHANE INJECTION (SOLID ELASTIC RESIN , FOAM IN CONTACT WITH WATER) FOR PERMANENT WATERTIGHT SOLUTION

CRYST INJECT MULTI® is a two-component, water-reactive, phthalate-free, low viscous, and elastic polyurethane injection resin. CRYST INJECT MULTI® is designed to have two phases of reaction property. In contact with water, it reacts to a closed-cell elastic foam within seconds. In case there is no water CRYST INJECT MULTI® reacts as an elastic solid resin. This newly developed injection resin combines two injection resin systems in one product (foam and solid resin).



FEATURE AND BENEFITS

- Phthalate-free.
- Closed cell foam.
- Ideal for potable water.
- Environmentally friendly.
- Permanent watertight solution.
- Excellent adhesion to wet surfaces.
- Shape-retaining does not shrink after curing.
- High volume expansion within a few seconds.
- Good chemical resistance and alkaline stability.
- Can be injected through one component pump.
- Low viscous that have Excellent penetration properties.
- Long processing time when a mixed component is kept in closed condition.
- Multi-purpose in one product that can work as elastic solid resin or as foam in contact with water.

APPLICATION

CRYST INJECT MULTI® is used for elastic sealing injection of cracks, voids, and joints in concrete structures, brickwork, and natural and artificial stonework.

Typical areas of application are e.g., tunnels, basements, diaphragm walls, manholes, elevator pits, reservoirs, sewage tanks, water tanks, pools, soil stabilization, etc.

CRYST INJECT MULTI® is available in
Component A : 10 ltr metal canister.
Component B : 10 ltr metal canister.

CRYST INJECT RESIN®

SEMI-RIGID POLYURETHANE INJECTION RESIN SYSTEM FOR PERMANENT WATERTIGHT SOLUTION



CRYST INJECT RESIN® is a two-component (component A+B), phthalate-free, very low viscous, and elastic polyurethane injection resin. Due to the very low viscosity, it leads to very deep penetration into hairline cracks and fine structures. CRYST INJECT RESIN® is designed to seal moist and dry cracks permanently, making a watertight system that has a limited volume expansion in contact with water/humidity. CRYST INJECT RESIN® is not used against flowing water.

FEATURE AND BENEFITS

- Ideal for potable water.
- Environmentally friendly.
- Good chemical resistance.
- Phthalate and solvent-free.
- Used as a one-component system.
- Good bonding to moist and dry surfaces.
- Can be injected through a 1K or 2K component pump.
- Low viscosity helps ensure complete penetration inside cracks.
- Elastic and permanent seal helps to absorb limited movements.

APPLICATION

CRYST INJECT RESIN® can be directly used to permanently seal cracks, voids, and joints in concrete structures, brickwork, and natural and artificial stonework. If the structure has water leakage, it is recommended to inject with CRYST INJECT FOAM®. Applications include tunnels, basements, diaphragm walls, manholes, reservoirs, water tanks, pools, etc.

CRYST INJECT FOAM® is available in :
Component A : 10 ltr metal canister.
Component B : 10 ltr metal canister.





CRYSTARM WATERSTOP®

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CRYST METAL®

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CRYST SWS®



CRYST METAL®

CRYSTALLINE METAL WATERSTOP FOR JOINT STRUCTURAL



CRYST METAL® is a crystalline metal water stop consisting of a special metal plate encapsulated in an active coating that reacts with water when embedded in the fresh concrete to provide a waterproof construction joint.

CRYST METAL® creates a physical barrier whilst active coating reacts with water in the concrete to form non-soluble crystals which support the natural self-healing process of the concrete to seal cracks and eliminate water ingress. Only 5 cm of concrete cover on both sides are necessary to seal cold joints up to 10 bars. The connection of the special coating to the concrete prevents any water flow through the concrete construction joint. This process is reactive every time water or moisture comes into contact with the coating during the lifetime of the structure and repeats the sealing process.

FEATURE AND BENEFITS

- No welding is required.
- Environmentally friendly.
- Easy handling and time-saving.
- Good bonding to the concrete.
- Saving time over traditional water stops.
- No special installation tools are required.
- Can be installed during pre and post-pour.
- Resist high water pressure up to 10 bars.
- Non-toxic – ideal for potable water tanks.
- Can be used for both vertical and horizontal applications.
- Protects against water, chloride, sulfate ingress, and chemical attack.
- Permanently waterproof and active throughout the lifetime of the structure.
- No collapse or displacement of the water stop when subjected to the weight of concrete poured from above.
- CRYST METAL® water stop encapsulated in a 1.25 mm thick on both sides with crystallization properties, which seals cracks in the concrete.

APPLICATION

CRYST METAL® apply to waterproof structural joints either vertical or horizontal :

- Other similar construction joints.
- Storage water tanks, swimming pools, water treatment tanks, sewage, and manholes.
- Building foundations, slabs, retaining walls, basements, precast panels, tunnels, and lift pits.

CRYST METAL® is available in 10 meters (5 plates, 2 m × 18 cm).



CRYST SWS®

SWELLING WATERSTOP TAPE FOR CONCRETE JOINT



CRYST SWS® is a swellable bentonite water stop tape for sealing vertical and horizontal structural joints, which are exposed constantly or temporarily to water. CRYST SWS® Swelling Tape is designed for use in non-movement joints of concrete. In contact with water, the reaction of the tape is activated and the tape starts swelling. Due to the swelling pressure in the construction joint, leads to penetration into cracks, joints, cracks, cavities, and seals the area.

FEATURE AND BENEFITS

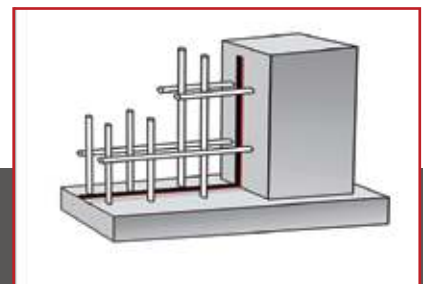
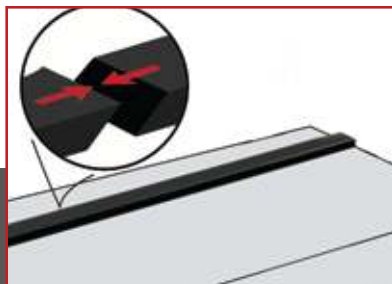
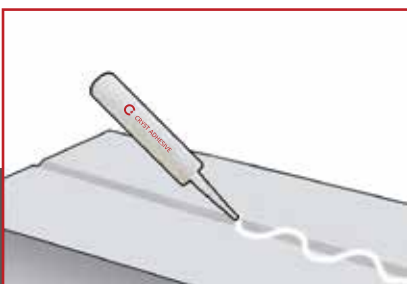
- Easy application.
- High swelling rate.
- Reliable and durable.
- Suitable in wet and dry cycle areas.
- Fast and reliable swelling performance.
- Waterproofed against pressurized water.
- Saving time over traditional water stops.
- Approved for use in drinking water reservoirs.
- Not dimensionally stable, therefore it has a high level of efficiency.

APPLICATION

Swelling tape is used for waterproof vertical or horizontal structural joints :

- Concrete pipes.
- Other similar non-moving cold construction joints.
- Building foundations, slabs, retaining walls, basements, precast panels, tunnels, and lift pits.
- Storage water tanks, swimming pools, water treatment tanks, sewage, and manholes.

CRYST SWS® is available in delivery form 30 meters/carton (6 rolls, 20 mm × 25mm × 5 m each).



CRYSTARM FLOOR®

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CRYST SEALER®

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CRYST PROTECT®







CRYST SEALER®

WATER REPELLENT SEALER

CRYST SEALER® is a water-repellent sealer applied onto cured concrete that forms a sub-surface barrier inside the concrete, that protects concrete against water penetration for the long term. When sprayed CRYST SEALER® onto a concrete surface, it is penetrating deeply and reacts to form a non-soluble gel sealing pores, capillaries, and cracks.



FEATURE AND BENEFITS

- Heat resistant after setting.
- Can be used outdoors or indoors.
- Non-toxic - ideal for potable water.
- Rapid development of water repellency.
- Helps to prevent freeze or thaw damage.
- Highly durable and effective beading effect.
- Helps to protect reinforcing steel from corrosion.
- Not optically noticeable after the complete reaction.
- Increase resistance against water, chloride, sulfate ingress, carbonation, and other chemical attacks.

APPLICATION

CRYST SEALER® is ideal to apply on concrete, block or brick walls :

- Concrete roof.
- Airport runways.
- Parking structures.
- Marine floats and docks.
- Traffic-bearing structures.
- podium decks, Bridge decks.
- Roof tiles and unglazed floor tiles.
- Sidewalks, patios, balconies, steps.
- Concrete pavers and retaining walls.
- Driveways, including exposed aggregate.

In short, everywhere concrete is directly exposed to the elements and considerable thermal stress can be expected.

CRYST SEALER® is available in 20 l gallon and 180 l drum.

CRYST PROTECT®

PROTECTIVE AND SEALER FOR CONCRETE FLOORS



CRYST PROTECT® is a terminated binder based on α -silane technology specially formulated for the impregnation of mineral substrates or as a layer coating for enhancing the standard and hardened concrete surfaces and cementitious overlays by forming a sealed protective finish resistant to water and stains. CRYST PROTECT® provides a high gloss aesthetic finish, eliminating the need for floor waxing, polymer-based coatings, liquid polishes, and constant maintenance.

FEATURE AND BENEFITS

- Fast drying.
- low viscosity.
- Non-flammable.
- Easy application.
- Environmentally friendly.
- UV stable and breathable.
- Solvent and plasticizer-free.
- Eliminates constant floor waxing.
- Reduces floor maintenance costs.
- Can be used outdoors or indoors.
- Helps to prevent freeze or thaw damage.
- Excellent Stain-Protection / Easy to Clean.
- Provides high gloss and good light reflection.
- Nano molecules ensure deep penetration Nontoxic
- Good scratch resistance, high hardness, and abrasion resistance.

APPLICATION

CRYST PROTECT® is ideal to apply on concrete, block or brick walls :

- Terrazzo.
- Aircraft hangars.
- Warehouse floors.
- Polished concrete.
- Cementitious overlays.
- Food-processing plants.
- Showrooms and schools.
- Distribution and storage facilities.
- Standard and hardened concrete.
- Manufacturing / pharmaceutical facilities.
- Any type of facility with an exposed concrete surface.

CRYST PROTECT® is available in 20 l gallon, 200 l drum.



CRYSTARM MEMBERANE®

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CRYST FLEX®

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CRYST TOP COAT®

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CRYST ELASTIC®

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CRYST ROOF®



CRYST FLEX®

FLEXIBLE WATERPROOFING COATING



CRYST FLEX® is a one-component, elastic sealing coat with a special polymers content that penetrates into the pores of the substrate and seals it permanently. CRYST FLEX® is ideal for waterproofing all load-bearing and mineral substrates with sufficient strength. as well as It accommodates slight movement in cracks and at correctly specified movement joints. CRYST FLEX® is used for permanently securing interior and exterior waterproofing of buildings against pressurized water.

FEATURE AND BENEFITS

- Environmentally friendly.
- High durability to long-term.
- Salt and chemical resistance.
- Very good crack-bridging ability.
- Protects against concrete carbonation.
- Protects reinforcing steel against corrosion.
- Excellent abrasion resistance and mechanical.
- Interior and exterior use, above or below grade.
- One-component product, only water needs to be added.
- Adjustable consistency, easy to apply by brush or trowel.
- Design to be cementitious binders for tile, ceramic, and marble.
- Non-flammable and non-toxic – ideal for potable water tanks.
- Seamless and jointless coating when applied continuously.
- Effective against extreme hydrostatic pressure from either positive or negative surface of the concrete.
- High adhesion properties on many substrates including concrete, cement mortars, stone, and masonry.

APPLICATION

Uses for all types of waterproofing coating are required or desired (Block – Brick – Stone – Concrete – Steel) :

- Marine structures.
- Exterior area: roofs, terraces, and balconies.
- Swimming pools, saunas, jacuzzis, and pump rooms.
- Wet area: bathrooms, shower, kitchens, and laundries.
- Water containment: water tanks, Water towers, and storage tanks.
- Before the application of ceramic tiles bonded with adhesives.
- Inside waterproofing of negative water pressure of walls and floors in basements.
- Below grade: basements, elevator pits, parking structures and foundations, concrete pip, and external wall surfaces to be backfilled in the ground.

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







CRYST TOP COAT®

WATERPROOFING ELASTOMERIC TOP COAT



CRYST TOP COAT® is a single component, elastomeric roof coating, water-based acrylic membrane in a white appearance that helps to reflect both sun rays and heat from the roofs and act as a waterproofing and heat insulator in a time. The high bonding and reflectivity combined with good weatherability, ultraviolet resistance, adhesion, and ease of application make CRYST TOP COAT® an effective coating for providing long-term reflectivity over a wide range of roofing substrates such as concrete, cement screeds, and tin sheets.

FEATURE AND BENEFITS

- Very good elastic properties.
- Self priming, non-toxic, and non flammable.
- High durability to long term weathering effect.
- Suitable to be coated over leaking finished roofs.
- Ideal for waterproofing, UV stable, and external conditions resistant.
- Helps save energy costs by reflecting sun rays and heat away from the building.
- High adhesion on many substrates including concrete, cement mortars, and screeds properties.

APPLICATION

- Decorative overlay and over existing terrazzo tiles.
- Waterproofing of corrugated sheets and sloped roofs.
- Uses for all types of waterproofing and protective coating for roofs, terraces, and balconies.
- Waterproofing and protective coating for most building substrates such as concrete, cement screeds, brick, plastering, tiles, zinc, PU foam, and steel.

CRYST TOP COAT® is available in 20 kg pail

CRYST ELASTIC®

2 K FLEXIBLE WATERPROOFING COATING



CRYST ELASTIC® is a two-component, hydro active, highly elastic, cement and rubber-based sealing coat. CRYST ELASTIC® consists of a cementitious powder component (component A) and low viscous rubber dispersion (component B). These two components chemically react when mixed to produce a firm, yet still highly flexible coating that can be simply applied by stiff brush, roller, spray or trowel to obtain the desired texture.

FEATURE AND BENEFITS

- Environmentally friendly.
- Interior and exterior use.
- Allow the substrate to breath.
- Effective against hydrostatic pressure.
- Highly elastic with good crack bridging ability.
- Excellent abrasion resistance and mechanical.
- Ideal for waterproofing above or below grade.
- High durability to long-term weathering effect.
- Non-flammable and non-toxic – ideal for potable water tanks.
- CRYST ELASTIC® also design to be cementitious binders for tile, ceramic, and marble.
- High adhesion properties on many substrates including concrete, cement mortars, stone, and masonry.

APPLICATION

Uses for all types of waterproofing coating is required or desired (Block – Brick – Stone – Concrete – Mortars) :

- Marine structures.
- Exterior area: roofs, terraces, and balconies.
- Swimming pools, saunas, jacuzzis, and pump rooms.
- Wet area: bathrooms, shower, kitchens, and laundries.
- Before the application of tiles bonded with adhesives.
- Water containment: water tanks, Water towers and storage tanks.
- Exterior basement walls, plinths, foundations, floor slabs as a horizontal barrier, under masonry, under tiles.
- Concrete surfaces of walls and rafts or slabs to earth-retained structures such as habitable basements, car parks, plant rooms, Bridges, and lift pits.



CRYST ROOF®

ELASTIC WATERPROOFING ROOF COAT



CRYST ROOF® is a one-component, elastic, sealing coat with a very high special polymers content that penetrates into the pores of the substrate and seals it permanently to provide a flexible waterproofing of roof buildings. It presents excellent bonding and elongation characteristics, which makes it an ideal solution for surface waterproofing under temperature variations, crack bearing, and moving surfaces.

FEATURE AND BENEFITS

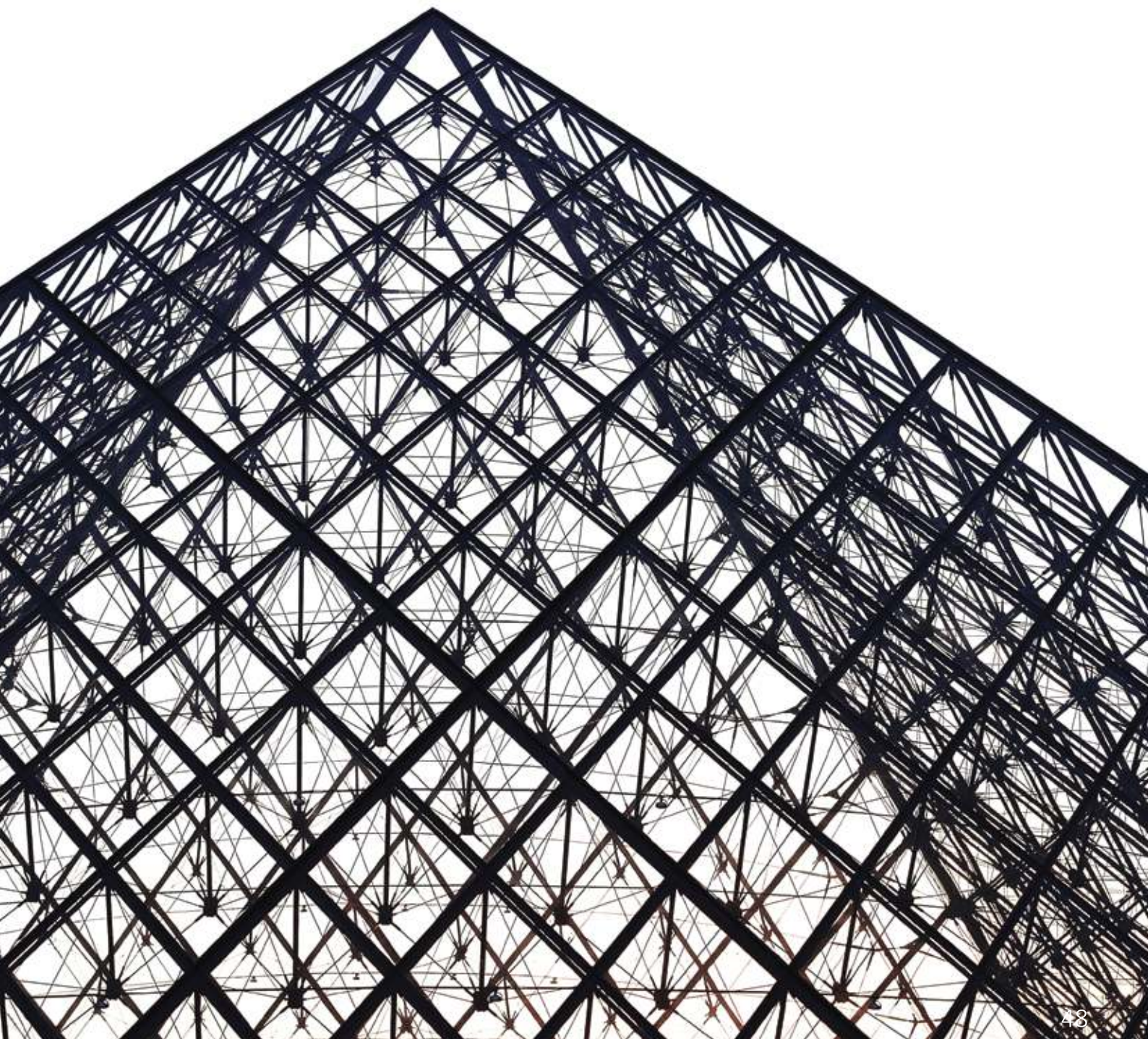
- Environmentally friendly.
- Self priming, non-toxic, and non flammable.
- Excellent abrasion resistance and mechanical.
- High durability to long term weathering effect.
- Suitable to be coated over leaking finished roofs.
- Excellent elongation and crack bridging properties.
- One-component product, only water needs to be added.
- Seamless and jointless coating when applied continuously.
- Ideal for waterproofing, UV rays stable, and external conditions resistant.
- save energy costs by reflecting sun rays and heat away from the building.
- High adhesion on many substrates including concrete, cement mortars, and screeds properties.

APPLICATION

- Decorative overlay and over existing terrazzo tiles.
- Waterproofing of corrugated sheets and sloped roofs.
- Uses for all types of waterproofing and protective coating for roofs, terraces, and balconies.
- Waterproofing and protective coating for most building substrates such as concrete, cement screeds, brick, plastering, tiles, PU foam, and primed steel.

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







ECO CRYSTARM®

Ensure dependability and sustainability.

CRYSTARM® has a great footprint into sustainability, better resource for usage, and sustainability "greener" construction techniques. While concrete in general was not instantly thought of as a "green" product, CRYSTARM® provides the longevity of concrete buildings which reduce the needs of costly repairs and providing non-toxic chemicals (approved by environmental laboratories) all serve to more sustainable construction projects.

Quality control.

Our rigorous quality assurance manufacturing methods, as well as our ISO 14001 accreditation, demonstrate our commitment to sustainability. This includes our meticulous selection of raw materials from local vendors.

Sustainable & cost-effective.

All of our products meet the highest environmental compliance requirements and are evaluated on a regular basis by recognized testing laboratories to guarantee compliance with the most recent standards.

The more environmentally friendly option.

CRYSTARM technology is fully free of volatile organic compounds (VOC), and contain non-toxic components, which is approved to be used in potable water or food-containing applications.

Let's Dive into CRYSTARM®



A WIDE RANGE OF SOLUTIONS ENSURES DURABLE RESULTS.

Not just a product

but a set of solutions. We don't just "deliver world-class products" at CRYSTARM. Using our concrete technical knowledge and experience, we collaborate with the consumer to logical starting point. Many years of practice, an international presence, and productive and effective in improving concrete mix and effectiveness have gone into creating our universe products.

There are a lot of initiatives and only one aim. To get optimal performance, we need to combine appropriate goods with an appropriate application technique. With CRYSTARM, concrete partners and builders can supply the correct mix for the unique concrete kinds that meet the building profession's increasingly competitive quality objectives.

Our professional exports sales executives assist our clients by providing technical expertise about the properties and right use of our goods, training through technical seminars, and a wide range of promotional materials to promote sales.



CONTACT

Address

Drescherstraße 53, 71277
Rutesheim, GERMANY

Phone & Fax

Tele: +49 (0) 7152 300 330
FAX: +49 (0) 7152 300 355

Mail

info@crystarm.com