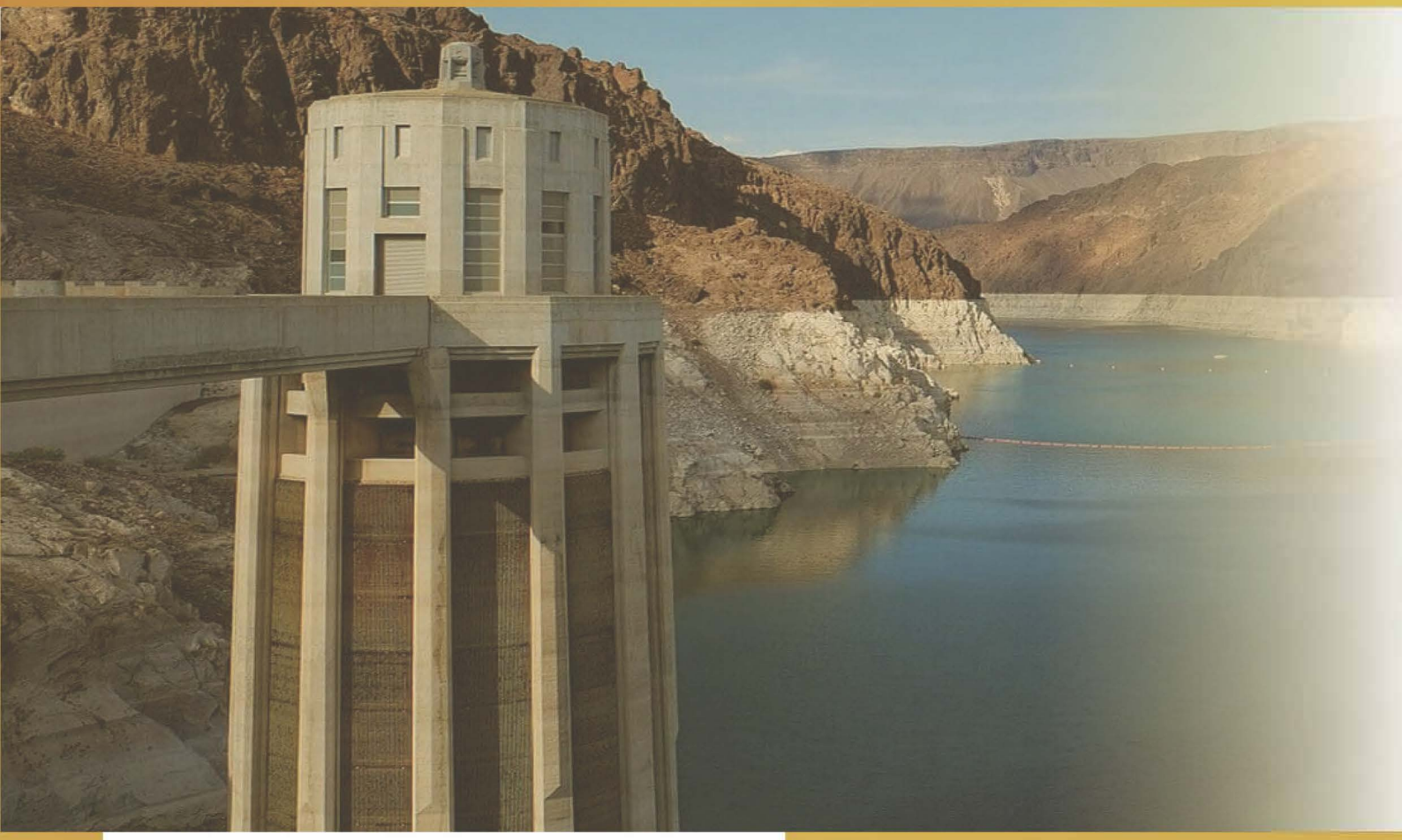


ADMIX CRYSTALLINE WATERPROOFING

therglassconcrete®
crystalline waterproofing

therglassconcrete®
crystalline waterproofing

About us?

The Therglass® Concrete Company, is a company belonging to the Ibercal® International Business group, created to develop and market solutions for the consolidation, waterproofingand comprehensive protection of concrete and all types of mineral surfaces.

The Therglass® Concrete Company, has a human team with extensive experience in the chemical industry of contruction products and systems for civil engineering.

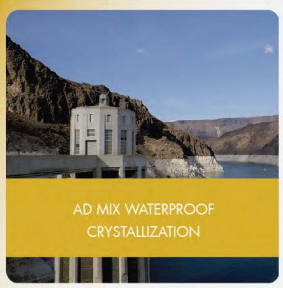
The products developed by Therglass® are manufactured exclusively by the Ibercal® Group, in its fully automated plant for special dry mortars in Almendralejo (Spain).

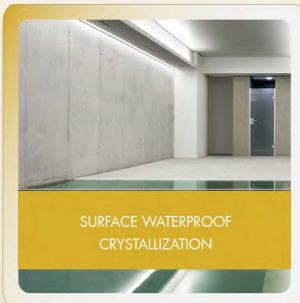
In addition to the headquarters and the research laboratory, from this location we manage the global distribution of our products and systems to more than 15 countries.

The Ibercal® Group exchanges technology with the most important groups and companies in the world, for the development, acquisition or transfer of cutting-edge systems, patents and applications.

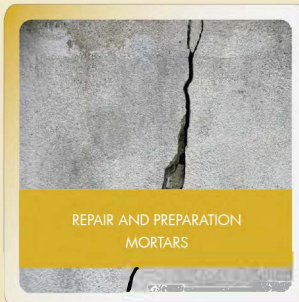
That is why, The Therglass® Concrete Company, has the authentic and genuine crystalline technology, Therglass® Crystalline Waterproofing, for the waterproofing of systems that contain cement, as well as mineral consolidants based on lithium nano-silicates. and sodium (Therglass® Concrete Inner) for catalyzed nanocrystallization as protection for mineral surfaces.

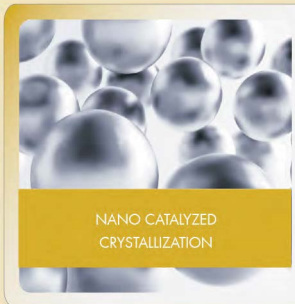
PRODUCT RANGE

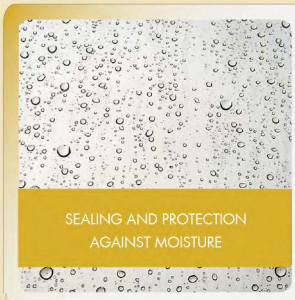

AD MIX WATERPROOF CRYSTALLIZATION

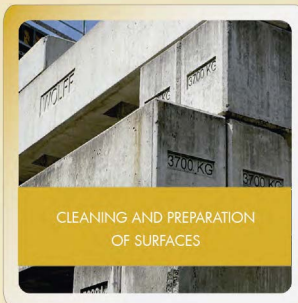

SURFACE WATERPROOF CRYSTALLIZATION


ADDITIVES FOR CONCRETE MANUFACTURING

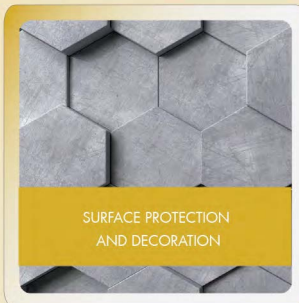

REPAIR AND PREPARATION MORTARS


NANO CATALYZED CRYSTALLIZATION


SEALING AND PROTECTION AGAINST MOISTURE



CLEANING AND PREPARATION OF SURFACES

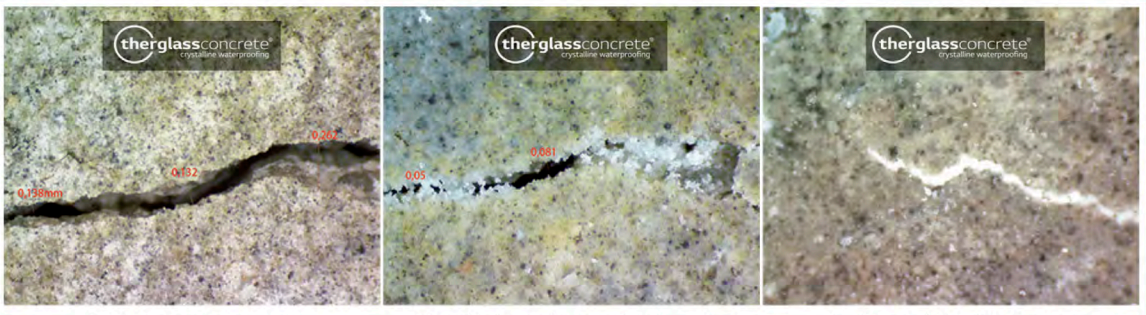

SURFACE PROTECTION AND DECORATION



USE AND APPLICATION GUIDE

PRODUCT	TherGlass® Concrete ADMIX HD-700	TherGlass® Concrete ADMIX HD-250	TherGlass® Concrete ADMIX HD-100	TherGlass® Concrete PROMIX
PROPERTIES	Cementitious additive with active chemical principles that, added to the concrete mix, give it permanently waterproof properties, protect reinforcements from corrosion, prevent cracks and cracks due to ASR / AAR reactions and give concrete self-sealing properties. micro-fissures.			Compound in the form of a pre-mixed dry mortar, with a crystalline chemical additive with a hydro-reactive effect, to protect concrete against seawater, sewage and certain chemical solutions.
FUNCTION	Waterproofing Additive with Crystalline technology for mass concretes, which avoids the transmission of water and other fluids under conditions of high hydrostatic pressure.			Crystalline Waterproofing for fresh and layered concrete slabs (Sanwich).
TYPE OF ADDITIVE	"PRAH" Permeability Reducing Admixtures for Hydrostatic conditions, according to ACI Report No. 212.3R-10 - (American Concrete Institute)			
COMPATIBILITY WITH OTHER FLUIDIFYING ADDITIVES	Compatible with most standard fluidizers based on naphthalene sulfonates.	Compatible with most lignosulfonates, melanins formaldehyde or polycarboxylates based fluidizers or super fluidizers.		PND
REDUCTION OF Kneading Water	Up to 20% (depending on the mix design)	Does not modify the mixing water	Up to 5% (depending on the mix design)	
INCREASED FLUIDITY OF CONCRETE MASS	High	Does not modify fluidity		
WORKABILITY OF CONCRETE MASS	High	Does not modify workability		
EFFECTS ON FORGING	It slightly delays the setting time of the concrete approx. 10-20%	Does not delay the setting time of concrete		
EFFECT ON COMPRESSION STRENGTH	It can duplicate the values of the standard concrete (depending on the mix design) (*)	Increase of 30-50% over the values of the standard concrete (*)	Increase of 5-15% over the values of the standard concrete (*)	
EFFECT ON WATER PENETRATION DEPTH	Reduces the average depth of penetration by up to 65% (*)	Reduces the average depth of penetration by up to 50% (*)	Reduces the average depth of penetration by up to 40% (*)	
SELF-SEALING MICRO-FISSURES	Up to 0.7 mm in optimal concrete design conditions.		Up to 0.4 mm in optimal concrete design conditions.	Hasta 0.3 mm Up to 0.3 mm
HYDROSTATIC PRESSURE RESISTANCE	150 m.c.a (at positive and negative pressure)		120 m.c.a (at positive and negative pressure)	80 m.c.a (at positive and negative pressure)
RECOMMENDED USES	For the preparation of foundations or concrete structures and elements subjected to high water tables and / or high hydrostatic pressures, as well as others affected by soils with high sulfate or chloride content.			It is especially indicated for surface treatment as waterproofing and protection for thick slabs, screeds and horizontal concrete surfaces, as well as in "sandwich" applications.
INDICATED USE	Indicated for new design concretes where waterproofing and fluidity are required in the same additive.	Indicated for concretes already designed in the plant, to only add the additive either in the plant or directly on site.	Indicated for use in special concretes with large amounts of cement or fly ash, as well as where large amounts of concrete are expected.	
APPLICATION	It is added directly to the concrete mix in the manufacturing process.	It is added directly to the concrete mix in the manufacturing process or later on site.		It is applied by dusting the dry powder, on the concrete still in fresh state or on the bed with the reinforcement of the foundation slab already in place, and immediately before execution of the screed, and on it before the float with helicopter.
CONCRETE TYPE	Concrete without additives of any kind (fluidizers, super fluidizers or water reducers).	Concrete already added with fluidizers, super fluidizers or water reducers.		Structural concretes with optimal design properties.
DOSAGES AND CONSUMPTIONS	2% on the weight of cement and fly ash contained in it, up to a maximum of 7 kg for each cubic meter of concrete.	2.5 kg / m^3 of concrete	1 kg / m^3 of concrete	1 kg / m^2 per coat applied by manual dusting or with tracing machine.
OBSERVATIONS	(*) Optimum design properties of the mixture will be considered, a concrete with a minimum quantity of 300 kg of cement per m3 and an A / C ratio equal to or less than 0.45.			

Evolution of the process of crystallization and sealing of a fissure, in concrete with Therglass® Admix Crystalline Waterproofing



Initial state of the crack | After 11 days of immersion in water | Sealing and Total Protection

therglassconcrete®
crystalline waterproofing

WHAT IS THERGLASS® CONCRETE?

It is a state-of-the-art geo-polymer, which waterproofs concrete by crystallizing the capillary network, through a hydrophilic process that activates a catalytic reaction of the non-hydrated cement particles present in the concrete, creating millions of insoluble crystals that block the passage of water.

HOW DOES IT WORK?

Water dissolves the non-hydrated cement particles present in the concrete, reacting with Therglass® Concrete geo-polymers, creating millions of insoluble crystals, blocking the passage of water, waterproofing the capillary pores to resist the water penetration under hydrostatic pressure, either positive or negative.

PROPERTIES

TOTAL AND ACTIVE WATERPROOFING

Stops water seepage in concrete subject to hydrostatic pressure, and waterproofs completely, as it becomes an integral part of the concrete. Maintains the permeable properties.

IMPROVEMENT OF CHEMICAL RESISTANCE

It gives concrete an excellent resistance to attacks by sulfates, chlorides and acids, it controls leaching and protects iron reinforcements against corrosion.

GREATER MECHANICAL STRENGTH

It provides self-sealing properties of fissures, minimizes cracking and increases considerably mechanical strength, being able to double compression strength.

NATURAL AND SAFE PRODUCT

It is a natural and harmless geo-polymer, does not contain solvents, is non-toxic, or flammable and is VOC-free. It is suitable for use in contact with drinking water.

APPLICATIONS

Therglass® Concrete Admix, is used for the integral waterproofing of new construction concrete, which is going to be subjected to hydrostatic pressures and phreatic levels, as well as on existing concrete structures that present water leaks and need to be reinforced against aggressive external agents.

Foundations affected by soils with a high content of sulfates or chlorides.

Maritime works.
Hydraulic structures.
Tunnels and mining.
Basements and parking lots.
Docks and bridges.
Screen walls, slabs or concrete screeds.
Precast concrete elements.
Shotcrete concrete.
Pools and aquariums, purification and / or desalination plants
Channels and aqueducts.
Drinking water tanks.
Elevator shafts.
Constructive cold joints.

Therglass® Concrete
ADMIX HD-700



Therglass® Concrete
ADMIX HD-250



Therglass® Concrete
ADMIX HD-100



TherGlass® Concrete
PROMIX



REFERENCE PROJECTS



Project: Santo Domingo Metro.
Location: Juan Pablo Duarte, Churchill and Heroes' Stations in Santo Domingo (Dominican Republic).
Works: Repair of vaults in tunnels, roof slabs, screen walls and electrical transformation center.
Products used: TherGlass Concrete Plug, Barrier Coat, Base Coat and Top Coat for 14,500 m² and 3,200 ml of joints.
Owner: Office for the Rearrangement of Transportation (OPRET).
Builder / Applicator / Supplier: Impertec Dominicana.
Year: 2014.







Project: Office Buildings Territoria Apoquindo.
Location: Santiago de Chile, (Chile).
Works: Waterproofing 1700 m3 concrete foundation, slabs and screen walls.
Products used: Admix HD 700.
Owner: Real Estate Territory and Abu Dhabi Investment Authority (ADIA).
Builder / Applicator / Supplier: Grupo Flesan y Echeverria Izquierdo / Covflex.
Year: 2015.









Project: Cartagena Auditorium
Location: Cartagena (Murcia)
Works: Waterproofing of screen wall, stage box slab, transformation center and cold joint treatment.
Products used: TherGlass Concrete Admix HD 700, Plug, Barrier Coat, Base Coat and Top Coat, for and 87 ml of joints.
Owner: Cartagena City Council
Builder / Applicator / Supplier: UTE Intersa Levante-ACS / Construquín, S.L.
Year: 2013.



CHEMICAL RESISTANCE

HIGH MECHANICAL STRENGTH

100% ECOLOGICAL SUSTAINABLE PRODUCTS

WATERPROOF BREATHABLE

therglassconcrete®
crystalline waterproofing

CE

The Therglass® Concrete Company

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