



Integral liquid crystalline waterproofing technology

Chryso® CWA Liquid 200

The **1st** and **ONLY**
supplier in
AFRICA

Chryso now offers an
integral liquid crystalline
waterproofing solution.





Chryso[®] CWA Liquid 200

Integral liquid crystalline waterproofing technology

When added to cement, Chryso[®]CWA Liquid 200 reacts to form a non-soluble crystalline structure within the concrete, permanently sealing the surface and preventing water penetration. In addition to its waterproofing properties, it also provides corrosion protection and extends the lifespan of your concrete structures.

- This advanced admixture uses cutting-edge nanotechnology to chemically enhance the cement matrix, reducing pore and capillary size for improved durability.
- Self-healing through crystallization.
- Improve concrete durability.
- Chryso[®]CWA Liquid 200 can be used in conjunction with all types of SCM's (Supplementary Cementitious Materials).
- Complementary with other Chryso[®] admixture solutions.

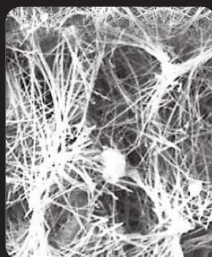
Untreated
concrete



Crystal
growth



Fully developed
crystal growth



No crystal forming
waterproofers
present. Untreated
concrete. Open
pore structure.



Crystal growth
in concrete after
application of
crystals forming
waterproofers.



Fully developed
crystal growth at
28 days within the
capillary tracts of
concrete to block
flow of water.



Advantages of using an integral liquid crystalline waterproofing solution



Our cutting-edge liquid crystalline waterproofing admixture delivers permanent protection from the inside out, enhancing not only waterproofing performance but also the durability of your concrete.

Comprehensive Waterproofing

- Seals micro-cracks and hairline cracks up to 0.5 mm.
- Waterproofs the entire concrete matrix.
- Withstands hydrostatic pressure.
- Permanent solution – no reliance on surface membranes or bond.

Superior Durability and Protection

- Increases overall concrete strength and durability.
- Guards against chloride and sulphate ingress.
- Boosts chemical resistance and resists carbonation.
- Reduces the risk of freeze-thaw damage.



Efficient Construction

- Fast-tracks construction time lines.
- No installation, seams, or joints required.
- No costly surface preparation needed.
- Added to concrete – not constrained by weather conditions.

Improved Workability and Sustainability

- Enhances hydration process and concrete workability.
- Liquid form ensures easy dosing vs. traditional powder.
- Environmentally friendly and non-toxic.
- Contains no VOCs – safe for people and planet.



Benefits of liquid crystalline waterproofing admixture vs. traditional powder waterproofing products



Traceability

Automated recording of liquid solution vs traditional powder added manually at concrete batching plants.



Improved Quality

Improved liquid product dispersion vs traditional powder in concrete mix.



Less Wastage

Accurate and controlled dosages vs manual batching. No wastage of powder at concrete batching plants.



Improved Safety

Product dosed with Chryso dispenser vs manual powder addition by hand into mixing drum.



Adaptability

Easily adapt dosages for small concrete batches.



Optimised Cost Control

IMPORTANT

- Adjust water content accordingly before batching to account for the addition of Chryso®CWA Liquid 200.
- Chryso® offers full technical support relating to waterproofing crystalline solutions. Consult a Chryso® Technical Sales Representative with your concrete mix design.

Trial Report

Chryso®CWA Liquid 200

The following trial report highlights the performance and reliability of Chryso®CWA Liquid 200 under normal conditions, offering key insights into its application and effectiveness.

	Control Mix	CWA Liquid 200
Water / Cement ratio	0.57	0.57
7-Day Cube Strength	27	26
28-Day Cube Strength	35	34.5
OPI (Oxygen Permeability Index) (XC3, XC4)	9.67	10.12
Sorptivity (XC3, XC4)	6.61	4.49
Chloride Conductivity (XS2a)	0.57	0.36
Water Penetration	25.83	22.66

Results interpretation:

Suggested ranges for durability classification using index values as per table 6000/1.

Designation	Description	Cover	Minimum OPI	Maximum Sorptivity
XC3	Moderate Humidity. External concrete sheltered from rain in non-arid areas	50	9.00	11.00
XC4	Cyclic wet and dry	50	9.20	10.00

Designation	Description	Cover	Chloride conductivity
XS1	Exposed to airborne salt but not in direct contact with seawater or inland saline water	50	2.10
XS2a	Permanently submerged in sea (or saline water)	50	1.40

* **Test method:** SANS 3001-C03-PAG 1-3

* These test results were obtained using Chryso materials under standard laboratory conditions with typical raw materials. Chryso recommends conducting tests at an accredited laboratory using site-specific materials for accurate performance evaluation.

Chryso® CWA Liquid 200 liquid crystalline technology to repair micro cracks in concrete structures

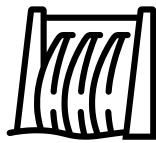


Areas of use

Suitable for a wide range of applications.



Basements



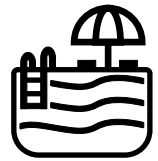
Dams



Water tanks



Reservoirs



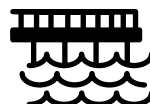
Swimming
pools



Tunnels



Water
treatment
plants



Marine
structures



Waste water
treatment
plants



Concrete
highways



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CHRYSO®CWA Liquid 200

Crystalline waterproofing admixture

Chryso
Concrete
Solutions

03/06/2025

DESCRIPTION

A high grade easy to handle integral **liquid waterproofing admixture** for both waterproofing and concrete corrosion protection using unique nanotechnology to chemically modify the cement matrix by reacting with the cement paste to reduce pore & capillary size.

The reaction between CHRYSO®CWA Liquid 200 and cement paste produces a non-soluble crystalline structure throughout the pores & capillaries permanently sealing the concrete.

BENEFITS

Uses include for all types of waterproofing and concrete corrosion protection in basements, water tanks, reservoirs, dams, waste water plants, swimming pools, water treatment plants, tunnels, marine structures, concrete highways etc.

Advantages include:-

- Seals micro cracks. Can seal hairline cracks up to 0.5 mm.
- Concrete waterproofed throughout.
- Improved durability. Increases concrete strength
- Protection against Chloride and sulphate ingress.
- Withstands hydrostatic pressure.
- Improves chemical and carbonation resistance.
- Fast tracks construction.
- No installation costs, seams or joints.
- Does not rely on bond to work.
- Permanent waterproofing.
- Integral waterproofer.
- Non toxic. No V.O.Cs.
- Reduces opportunity for freeze thaw damage.
- Improves workability and strength.
- May reduce existing admixture dosage.
- No costly surface preparation.
- Added to concrete not constrained by weather conditions.
- Liquid form does not clump as powders and easy to dose.
- Enhances hydration process.
- Environmentally friendly.

Benefits of CHRYSO®CWA Liquid 200 vs Powder waterproofing:

- Safety: No dust.
- Traceable through batch cards.
- Less waste.
- Controlled Dosages.

METHOD OF USE

CHRYSO®CWA Liquid 200 is added to the concrete at the time of batching at dosages of 0.8 - 1 litre per 100 kg of total cementitious material by automatic dispensers.

NB: Adjust water content accordingly before batching to account for the addition of CWA Liquid 200.

Under certain conditions the dosage used may be 2-3 litre per 100 kg of total cementitious material to meet the specific requirements of a project. For the optimum dosage consult CHRYSO.

Precast concrete plants :-

- Add the CHRYSO®CWA Liquid 200 to the aggregate and sand mix for 3 minutes before adding cement & water.

NOTES: Good dispersion of the admixture is important to get a homogeneous mix.

Under certain conditions the dosage used may be 2-3 kg per 100 kg of total cementitious material to meet the specific requirements of a project. For the optimum dosage consult CHRYSO.

Note : CHRYSO®CWA Liquid 200 should be tested in trial mixes to determine the optimum dosage and any necessary changes to existing additive dosages. Do not use without checking workability, slump retention and retardation in advance. Agitate before use the liquid version.

Overdosing

Overdosing of CHRYSO®CWA Liquid 200 will result in increased workability and possibly more rapid set. In the case of accidental overdosing check strengths and setting times before stripping forms.

Overdosing normally will have no detrimental long term side effects as long as cured correctly with water before stripping forms. In general 28 day strengths would be improved. If in doubt contact CHRYSO Technical Department.

CHRYSO®CWA Liquid 200

Crystalline waterproofing admixture

PHYSICAL and CHEMICAL PROPERTIES

Product Nature	Liquid
Color	Translucent
Specific Gravity	± 1.21 - 1.23
pH	13 - 14
Chloride Content	Nil
Bulk Density	1.25 - 1.35

TECHNICAL SERVICE

Technical assistance including mix design preparation and supervision on site during incorporation of CHRYSO®CWA Liquid 200 is available by contacting CHRYSO.

QUALITY ASSURANCE

ISO 9001 : 2015 verified by TUV Nord.

ISO 14001 : 2015 verified by Lloyd's Register International.

PRECAUTIONS

- Protect from frost.

STORAGE AND SHELF LIFE

The product must be stored shaded at a minimum temperature of 45oF (7oC). Shelf life is one year when stored under proper conditions in original unopened packaging. Agitate the liquid form before use and protect from freezing.

SAFETY

CHRYSO®CWA Liquid 200 is highly alkaline. Protect hands with rubber gloves and wear safety goggles during mixing & application. Avoid contact with skin or eyes. Should contact occur, flush copiously with water. If irritation persists, contact a physician.

Prior to any use, please read carefully the Material Safety Data Sheets.

PACKAGING

- 200 ℓ drum
- 25 ℓ jerry can
- 1000 ℓ flow bin
- Bulk delivery on request