

CHRYSO®Tard CHR

Chloride-free set retarding water reducing/
plasticising admixture

DESCRIPTION

- CHRYSO®Tard CHR is classified as a set retarding water reducing/plasticising admixture according to SANS 50934-2(EN 934-2). The admixture thus induces the following major effects on a concrete mix:
- Produces the combined effects of a high range reducing/plasticising admixture (primary function) and
- A set retarding admixture (secondary function).

BENEFITS

- Water reduction significantly improves compressive strengths at all ages. CHRYSO®Tard CHR allows strength grades to be met at reduced cement content or increased workability.
- Water reduction enhances durability through production of low permeability concrete.
- Controlled retardation extends the working life and the stiffening time for ease of construction, minimising delay problems.
- Control of stiffening improves slip forming and assists in preventing the formation of cold joints in large pours.
- Reduces slump loss, particularly at higher temperatures.
- Chloride free, safe for use in pre-stressed and reinforced concrete.
- CHRYSO®Tard CHR does not modify the consistency of the concrete.
- CHRYSO®Tard CHR can be used in conjunction with a superplasticiser from the CHRYSO®Fluid Optima Range.

PHYSICAL and CHEMICAL PROPERTIES

Product Nature	Liquid
Color	Brown
Lifetime	12 months
Water solubility	miscible
Halogen Dry Extract	14,75 % ± 2,00
Cl ⁻ Ions content	≤ 0,100 %
pH	6,00 ± 1,00
Dry extract (EN 480-8)	14,75 % ± 2,000
Specific Gravity	1.14 ± 2
Viscosity	8 - 15 secs (Ford #4 Cup)

PACKAGING

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

METHOD OF USE

Use

- Suitable with all types of Portland cement
- Semi-dry concrete screeds
- Mixes containing fly ash, slag and silica fume
- Reinforced or pre-stressed concrete
- Transport of concrete over long distances
- Tiling mortar
- Piles, diaphragm walls

Dosage :

- The optimum dosage of CHRYSO®Tard CHR can only be established by using trial tests, taking into account local conditions affecting the workability of the fresh mix and the mechanical properties required of the concrete.

Typical

- By volume: 0.2 to 1.0 litres per 100 kg of cementitious material (including extenders)
- By weight: 0.21 to 1.06 kg per 100 kg cementitious material (including extenders)

Range

- By volume: 0.19 – 1 litres per 100 kg of cementitious material (including extenders)
- By weight: 0.52 to 1.08 kg per 100 kg cementitious material (including extenders)
- The retarding effect of CHRYSO®Tard CHR is directly proportional to the dosage used.

Overdosage

- An overdose of double the recommended amount may result in a significant increase in retardation. Provided that adequate curing is maintained, the ultimate strength of the concrete will not be impaired. The overdose will increase the plasticising effect of CHRYSO®Tard CHR, allowing for increased water reduction and higher ultimate strengths. A significant rise in workability may lead to segregation and bleeding. The effects of overdosing will be further increased if sulphate resisting

CHRYSO®Tard CHR

Chloride-free set retarding water reducing/
plasticising admixture

- 200 ℓ drum

cement or SCMs are used.

Dispensing/Mixing

- **CHRYSO®Tard CHR** should never be added to dry cement or to components of a mix that are dry.
- **CHRYSO®Tard CHR** can be added to concrete using one of the following methods:
- To the gauge water before mixing: **CHRYSO®Tard CHR** should be added to approximately 90% of the concrete's total gauge water requirement (including admixture). The remaining 10% of the concrete's total gauge water requirement (without admixture) should be added in small increments until the target concrete workability is achieved.
- As a component of the mixing process: Should be added simultaneously with approximately 90% of the concrete's total gauge water requirement.
- To fresh mixed concrete in a readymix truck drum: Reverse the readymix truck drum to discharge at very slow revolutions. When the concrete reached the mouth of the drum, stop the drum. Place **CHRYSO®Tard CHR** on the concrete and not onto any exposed surface of the drum interior. Change the direction of the drum onto mixing and thoroughly mix the concrete at maximum permissible drum rpm, in order to ensure effective dispersion of **CHRYSO®Tard CHR** throughout the concrete. (A minimum of 1 minute per 1 cubic metre of concrete; therefore 6 cubic metres = 6 minutes.)

PRECAUTIONS

Storage

- **CHRYSO®Tard CHR** has a shelf life of 12 months starting from the manufacturing date – provided no other chemicals are added to it.
- The product should be stored away from the rain and frost in clean, dry tanks.
- Prevent product from freezing.

SAFETY

- **CHRYSO®Tard CHR** is classified as harmless. CHRYSO will provide onsite assistance when requested.

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