

CHRYSO®Tard CE

Set Retarding admixture

Chryso
Concrete
Solutions

17/10/2024

DESCRIPTION

- CHRYSO® Tard CE is classified as a set retarding admixture according to SANS 50934-2 (EN 934-2). The admixture thus induces the following major effects in a concrete mix:
- Extends the time of commencement of transition of the mix, from the plastic to the rigid state.

BENEFITS

- CHRYSO® Tard CE modifies the hydrating reactions of the concrete and principally retards the time of initial setting.
- CHRYSO® Tard CE does not increase the length of time between the beginning and end of setting. Therefore, concrete retarded with CHRYSO®Tard CE will harden normally as soon as setting starts and high early and ultimate strengths can be obtained. Therefore, with the use of CHRYSO®Tard CE, concrete will remain in a state, which enables the revival of consistency (workability) lost over time, through the addition of appropriate admixtures.
- CHRYSO®Tard CE has no surface tension effects. Its use in concrete, in no way modifies the consistency (workability) of the concrete.

PHYSICAL and CHEMICAL PROPERTIES

Product Nature	Liquid
Color	Clear
Lifetime	12 months
Water solubility	miscible
Halogen Dry Extract	24.5 % ± 2
Cl ⁻ Ions content	< 0.1 %
Equivalent Content NA ₂ O	= 2 %
pH	6 ± 1
Dry extract (EN 480-8)	24.5 % ± 2
Specific Gravity	1.25 ± 2
Viscosity	8 - 15

PACKAGING

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

METHOD OF USE

- Suitable with for use with all types of Portland cement. Not suitable for use with Calcium Aluminate Cement.
- Concrete requiring prolonged consistency (workability).
- High performance and very high-performance concrete (low and very low w/c ratios), in conjunction with HRWRA/Superplasticizing admixtures.
- Manufacturing, transporting and placing concrete under high temperature conditions.
- Transport of concrete over long distances.
- Prevention of cold joints.

Dosage :

- The optimum dosage of CHRYSO® Tard CE 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: 0.25 to 0.60 litres per 100 kg of cementitious material (including extenders).
- By weight: 0.31 to 0.75 kg per 100 kg cementitious material (including extenders).

Range:

- By volume: 0.24 to 0.60 litres per 100 kg of cementitious material (including extenders).
- By weight: 0.30 to 0.76 kg per 100 kg cementitious material (including extenders).

Overdosage:

- An overdose of double the recommended amount may result in a significant increase in retardation. Provided that adequate protection during the plastic phase and curing during the hardening phase is maintained, the ultimate strength of the concrete will not be impaired (as a rule-of-thumb, for concretes retarded for a maximum of 5 days or less).

Dispensing/mixing

- CHRYSO® Tard CE should never be added to dry cement or to components of a mix that are dry.
- CHRYSO® Tard CE can be added to concrete using one of the

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following methods:

- To the gauge water before mixing: **CHRYSO® Tard CE** 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 freshly mixed concrete in a ready-mix truck drum: Reverse the ready-mix truck drum to discharge at very slow revolutions. When the concrete reaches the mouth of the drum, stop the drum.
- Place **CHRYSO® Tard CE** on the concrete and not onto any exposed surface of the drum interior. Change the direction of the drum to mixing and ensure that all material has moved to the bottom of the drum. Repeat a minimum of 2 more times (preferably 3), the reverse to discharge at very slow revolutions, until the concrete reaches the mouth of the drum and then change to mixing until the concrete has moved to the bottom of the drum – to ensure that all of the internal upper drum surfaces have been cleared of admixture and to ensure a more effective dispersion of admixture during actual mixing. When completed, thoroughly mix the concrete at maximum permissible drum rpm, in order to ensure effective dispersion of **CHRYSO® Tard CE** throughout the concrete. (a minimum of 1 minute per cubic metre of concrete; therefore 6 cubic metres = minimum 6 minutes). After completion of mixing at maximum rpm and before discharge, allow the concrete to agitate for 1 – 3 minutes at very low drum rpm (travel rpm).

PRECAUTIONS

Storage

- **CHRYSO® Tard CE** 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 CE** is classified as harmless.
- For more information, please refer to the material safety data sheet.

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