Revision number: 2
Date: 2018/05/21
Supersedes: 2012/11/13

Technical data sheet

CHRYSO® Alpha HC 570

Water – Reducing Plasticiser

Description

CHRYSO®Alpha HC 570 is a new generation admixture, developed as a result of hybrid technology and is classified as a water reducing plasticiser.

CHRYSO®Alpha HC 570 induces the following major effects in a concrete mix:

- Without affecting the consistence, permits a reduction in the water content or
- Without affecting the water content, increases the slump/flow or
- Produces both of the above affects simultaneously.

CHRYSO®Alpha HC 570 has specifically been designed to entrain a small amount of air. Depending on the aggregates used in conjunction with the overall concrete mix design, the 2% by volume total air content of the concrete may be exceeded.

Standards

CHRYSO®Alpha HC 570 conforms to SANS 50934-2:2011 (EN 934-2:2009)

Advantages

- **CHRYSO®Alpha HC 570** is a multi-dose admixture, allowing a wide range of dosages to be applied, without any excessive retardation at the higher dosages.
- The multi-dose characteristic of **CHRYSO®Alpha HC 570**, allows concrete to exhibit extended workability characteristics
- **CHRYSO®Alpha HC 570** is often used when problematic fine aggregates are components of a concrete mix
- **CHRYSO®Alpha HC 570** reduces the rate of bleeding in a concrete mix

Physical and chemical properties

- Nature: liquid
- Colour: translucent yellow
- Relative density: 1.085(typical)
  1.075-1.095(range)
- pH: 7.5(typical)
  6.5-8.5(range)
- Cl^- ions content: ≤ 2.00%
- Na_2O equivalent: ≤ 2.00%
- Dry extract (halogen): 31.5% ± 1.1%
- Dry extract (EN 480-8): 31.5% ± 1.1%

- **CHRYSO®Alpha HC 570 i**mproves the cohesion and lowers the viscosity of a concrete mix. This results in an improved homogeneity, allowing for superior off-shutter finishes.
- The air entraining property of **CHRYSO®Alpha HC 570**, enhances the concretes durability, by increasing its freeze/thaw resistance.
- In common with all water reducing/plasticing admixtures, the use of **CHRYSO®Alpha HC 570** reduces the overall cost of a cubic metre of concrete. This in turn, allows less cement to be used in order to achieve the same objective, resulting in a solution which is environmentally friendly

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Application Guidelines

Use

- All types of cement
- Ready-mix concrete
- Pumped concrete
- High workability concrete
- Highly reinforced concrete
- Roller compacted concrete

Dosage

- Range = 0.25 – 1.5 litres per 100kg of cementitious (inc. reactive extenders). This is equivalent to 0.25% - 1.5% (volume ÷ weight) by weight of cementitious (inc. reactive extenders).
- Typical = 0.3 – 0.5 litres per 100kg of cementitious (inc.reactive extenders). This is equivalent to 0.3% - 0.5% (volume ÷weight) by weight of cementitious (inc. reactive extenders).
- The optimum dosage of **CHRYSO®Alpha HC 570** should be established using trial tests, taking into account local condiions and local materials affecting the workability of the fresh mix, as well as the mechanical properties required of the concrete.
- **CHRYSO®Alpha HC 570** may be used in conjunction with other **CHRYSO** Admixtures.(Confirm with CHRYSO Technical consultant)

Dispensing/Mixing

- **CHRYSO®Alpha HC 570** is completely miscible in water.
- **CHRYSO®Alpha HC 570** should never be added to dry cement or to components of a mix which are dry.
- **CHRYSO®Alpha HC 570** can be added to concrete using one of the following methods:
  - To the gauge water before mixing. In this case, the admixture should be added to approximately 90% of the concrete's total gauge water requirement (with 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 drum to discharge, at very slow revolutions.When the concrete reaches the mouth of the drum, stop the drum. Place the admixture on the concrete and not onto any exposed surface of the drum interior. Change the direction of the drum to mixing and thoroughly mix the concrete at maximum permissible drum rpm, in order to ensure effective dispersion of the admixture throughout the concrete i.e. a minimum of 1 minute per cubic metre of concrete (e.g. 6 cubic metres = 6 minutes)

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Storage/Precautions

- Should the product freeze, it will recover its properties after controlled thawing and agitation.
- **CHRYSO®Alpha HC 570** should be stored away from rain or frost, in clean dry tanks.
- **CHRYSO®Alpha HC 570** has a shelf life of 9 months from date of manufacture, provided no chemicals are added to it.

Packaging

- 25ℓ jerrycan
- 200ℓ blopak
- 1000ℓ flobin
- Bulk tanker
- Delivery on request

Health and Safety

- This product is classified as harmless.
- Refer to the Material Safety Datasheet for more information