



Technical data sheet

CHRYSO®Omega 162

New generation, high range water reducing plasticiser

Description

CHRYSO®Omega 162 is classified as a water reducing plasticiser according to SANS 50934-2:2011 (EN 934-2:2009). The admixture thus induces the following major effects in a concrete mix:

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

Advantages

- **CHRYSO®Omega 162** 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®Omega 162** allows concrete to exhibit extended workability characteristics. Due to its large scale of dosage, **CHRYSO®Omega 162** can create a varied range of concrete.
- **CHRYSO®Omega 162** has a strong dispersing capacity on the fine elements of concrete, producing fluid concrete.
- **CHRYSO®Omega 162** reduces the rate of bleeding in a concrete mix.
- **CHRYSO®Omega 162** improves the cohesion and lowers the viscosity of a concrete mix. This results in an improved homogeneity, allowing for superior off-shutter finishes.
- By reducing the need to add extra water, **CHRYSO®Omega 162** increases the durability of concrete.
- **CHRYSO®Omega 162** is robust to differences in cement characteristics.

- **CHRYSO®Omega 162** does not undermine the early age strength of concrete.
- In common with all water reducing/plasticising admixtures, the use of **CHRYSO®Omega 162** 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.

Standards

CHRYSO®Omega 162 conforms to EN 934-2:2009 (table 2) and conforms to the requirements of ASTM C494 Type A and Type D.

Physical and chemical properties

- Physical state: liquid
- Specific gravity (25°C): 1.075 (±0.01)
- Colour: brown
- pH: 8 (±2)
- Cl ions content: ≤ 0.1%
- Na₂O: ≤ 2%
- Dry extract (halogen): 20% (±1.1%)
- Dry extract (EN 480-8): 29.5% (±1.1%)
- Solubility in water: miscible

Application guidelines

Use

- Readymix concrete
- High workability concrete
- Pumped concrete
- Highly reinforced concrete
- Precast concrete



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Dosage

- The optimum dosage of **CHRYSO®Omega 162** can only be established after trial tests, taking into account local conditions affecting the workability of the mix and the mechanical properties required from the concrete.
- Range:
 - By volume 0.28 – 1.39 litres per 100 kg of cementitious material (including extenders)
 - By weight 0.3 to 1.5 kg per 100 kg cementitious material (including extenders)
- Precaution: Depending on the type of cement used (EN Classification) and the total SCM (Supplementary Cementitious Material) content; dosages exceeding 1.5 kg per 100 kg of cement may increase the setting time of the concrete, with an increase in strengths at later ages. At these dosages, unacceptable concrete segregation may be experienced; if the mix design is not adjusted to compensate i.e. reduction of free water content with a corresponding reduction in cementitious content.

Dispensing/mixing

- **CHRYSO®Omega 162** is completely miscible in water.
- **CHRYSO®Omega 162** should never be added to dry cement or to components of a mix that are dry.
- **CHRYSO®Omega 162** can be added to concrete using one of the following methods:
 - To the gauge water before mixing: **CHRYSO®Omega 162** 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 reaches the mouth of the drum, stop the drum. Place **CHRYSO®Omega 162** 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®Omega 162** throughout the concrete. (a minimum of 1 minute per 1 cubic metre of concrete; therefore 6 cubic metres = 6 minutes).

Storage

- **CHRYSO®Omega 162** 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 freezing.

Packaging

- Bulk tanker loads
- 1 000 litre containers
- 200 litre plastic drums

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Health and Safety

This product is classified as harmless. **CHRYSO** will provide onsite assistance when requested. Refer to the material safety data sheet.

The information contained in this document is given to the best of **CHRYSO's** knowledge and is the result of extensive testing. However, this document will not under any circumstances be considered as a warranty involving **CHRYSO's** liability in case of misuse. Tests should be carried out before any use of the product to ensure that the methods and conditions of use of the product are satisfactory. **CHRYSO** specialists are at the disposal of the users in order to help them with any problems encountered.