TECHNICAL DATA SHEET

Chryso Concrete Solutions

17/10/2024

CHRYSO®Plast Omega 164

Water reducing plasticiser

DESCRIPTION

CHRYSO®Plast Omega 164 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.

BENEFITS

- **CHRYSO® Plast Omega 164** 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® Plast Omega 164 allows concrete to exhibit extended workability characteristics.
- Due to its large scale of dosage, **CHRYSO® Plast Omega 164** can create a varied range of concrete.
- **CHRYSO® Plast Omega 164** has a strong dispersing capacity on the fine elements of concrete, producing fluid concrete.
- **CHRYSO® Plast Omega 164** reduces the rate of bleeding in a concrete mix.
- **CHRYSO® Plast Omega 164** 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® Plast Omega 164** increases the durability of concrete.
- **CHRYSO® Plast Omega 164** is robust to differences in cement characteristics.
- **CHRYSO® Plast Omega 164** does not undermine the early age strength of concrete.
- In common with all water reducing/plasticising admixtures, the use of **CHRYSO® Plast Omega 164** 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.

PHYSICAL and CHEMICAL PROPERTIES

Product Nature	Liquid
Color	Brown
Lifetime	12 months
Water solubility	Miscible
Halogen Dry Extract	26,00 % ± 2,00

METHOD OF USE

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

Dosage :

- The optimum dosage of **CHRYSO® Plast Omega 164** ccan 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® Plast Omega 164** is completely miscible in water.
- **CHRYSO® Plast Omega 164** should never be added to dry cement or to components of a mix that are dry.
- **CHRYSO® Plast Omega 164** can be added to concrete using one of the following methods:
- To the gauge water before mixing: **CHRYSO® Plast Omega 164** should be added to approximately 90% of the concrete's total

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Cl^- Ions content	≤ 0,100 %
Equivalent Content NA_2O	≤ 2,00 %
pH	8,00 ± 1,00
Dry extract (EN 480-8)	26,00 % ± 2,000
Specific Gravity	1.08 ± 2
Viscosity	10 - 20 secs (Ford #4 Cup)

Standards

- **CHRYSO® Plast Omega 164** conforms to EN 934-2:2009 (table 2) and conforms to the requirements of ASTM C494 Type A and Type D.

PACKAGING

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

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® Plast Omega 164** 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® Plast Omega 164** throughout the concrete. (a minimum of 1 minute per 1 cubic metre of concrete; therefore 6 cubic metres = 6 minutes).

PRECAUTIONS

Storage

- **CHRYSO®Plast Omega 164** 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.

SAFETY

This product is classified as harmless. **CHRYSO** will provide onsite assistance when requested.
Prior to any use, please read carefully the Material Safety Data Sheets.

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