

Technical data sheet

CHRYSO® Plast 900

Water reducing plasticiser

Description

CHRYSO® Plast 900 is classified as a water reducing plasticiser. The admixture thus induces the following major effects in a concrete mix:

- Without affecting the consistence (workability), permits a reduction in the water content of a given concrete or
- Without affecting the water content, increases the slump/flow or
- Produces both of the above effects simultaneously.

Standards

- CHRYSO®Plast 900 conforms to the requirements of SANS 50934-2 (EN 934-2) Table 2). These requirements are approximate equivalents of ASTM C494 Type A and D.

Advantages

- Increases workability at equal water contents.
- Reduces segregation during transport
- By reducing the need to add extra water, CHRYSO®Plast 900 increases the durability of concrete by reducing permeability.
- CHRYSO®Plast 900 improves compressive strengths at all ages - equal compressive strengths at reduced cement.
- In common with all water reducing/plasticising admixtures, the use of CHRYSO®Plast 900 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

- Physical state(@25°C): liquid
- Specific gravity (@25°C): 1.185 (±0.010)
- Colour: brown
- pH: 8.0 (±1.0)
- Viscosity(@25°C): 10 -20 secs (ford#4 cup)
- Cl ions content < 0,1%
- Na₂O equivalent: ≤ 2%
- Solubility in water: miscible

- CHRYSO®Plast 900 reduces the rate of bleeding in a concrete mix.
- CHRYSO®Plast 900 improves the cohesion and lowers the viscosity of a concrete mix. This results in an improved homogeneity, allowing for superior off-shutter finishes.

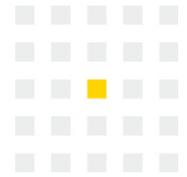
Application guidelines

Use

- Ready-mix concrete
- High workability concrete
- Pumped concrete
- Highly reinforced concrete
- Roller compacted concrete

Dosage

- The optimum dosage of CHRYSO®Plast 900 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.

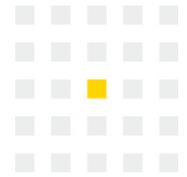


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- Range:
 - By volume: 0.2 to 0.5 litres per 100 kg of cementitious material (including extenders)
 - By weight: 0.23 to 0.59 kg per 100 kg cementitious material (including extenders)
 - Typical:
 - By volume: 0.14 to 0.5 litres per 100 kg of cementitious material (including extenders)
 - By weight: 0.17 to 0.59 kg per 100 kg cementitious material (including extenders)
 - Dosages approaching and over 1.5 litres per 100 kg of cementitious material (including extenders), may progressively retard the concrete.
- Dispensing/mixing**
- CHRYSO®Plast 900 is completely miscible in water.
 - CHRYSO®Plast 900 should never be added to dry cement or to components of a mix that are dry.
 - CHRYSO®Plast 900 can be added to concrete using one of the following methods:
 - To the gauge water before mixing: CHRYSO®Plast 900 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®Plast 900 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®Plast 900 throughout the concrete. (a minimum of 1minute 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).
- Storage**
- CHRYSO®Plast 900 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 rain and frost in clean, dry tanks.
 - After freezing, the properties of CHRYSO®Plast 900 can be recovered by controlled thawing and agitation.



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Packaging

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

Health and safety

- This product is classified as harmless. CHRYSO will provide onsite assistance when requested.
- For more information, please refer to the material safety data sheet.

Disclaimer: 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.