

# Technical data sheet

## CHRYSO® Fluid Premia 100

New generation, high range water reducing/superplasticising admixture

### Description

CHRYSO® Fluid Premia 100 is classified as a high range water reducing/superplasticising admixture according to SANS 50934-2:2011 (EN 934-2:2009). The admixture thus induces the following major effects on a concrete mix:

- Without affecting the consistence, permits a high reduction in the water content of a given concrete mix or
- Without affecting the water content increases the slump/flow considerably or
- Produces both effects simultaneously.

### Advantages

- Can be used to manufacture a wide range of concrete.
- CHRYSO® Fluid Premia 100 is compatible with most types of cement.
- The early compressive strength of concrete is increased as a direct result of the lower water/cement ratio.
- Assists in the placing of concrete (even without a vibrator).

### Standards

CHRYSO® Fluid Premia 100 conforms to EN934-2:2009 (SANS 50934-2) and ASTM C494 Type F.

### Physical and chemical properties

- Physical state: Liquid
- Specific gravity (@ 25 °C): 1.065 (± 0.01)
- Colour: Milky orange brown
- pH: 7 (± 2)
- Cl<sup>-</sup> ions content: ≤ 0.1%
- Na<sub>2</sub>O: ≤ 1.6%

### Application guidelines

#### Use

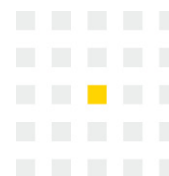
- Pre-stressed concrete.
- Readymix concrete.
- Precast concrete.
- Industrial beams.
- Slab bases.

#### Dosage

- The optimum dosage of CHRYSO® Fluid Premia 100 can only be established by carrying out 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: 0.23 to 1.87 ℓ per 100 kg of cementitious material (including extenders).
  - By weight: 0.25 to 2 kg per 100 kg cementitious material (including extenders).
- Range:
  - By volume: 0.23 to 1.88 ℓ per 100 kg of cementitious material (including extenders).
  - By weight: 0.24 to 2 kg per 100 kg cementitious material (including extenders).

#### Dispensing/mixing

- CHRYSO® Fluid Premia 100 is completely miscible in water.
- CHRYSO® Fluid Premia 100 should never be added to dry cement or to components of a mix that are dry.



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- CHRYSO® Fluid Premia 100 can be added to concrete using one of the following methods:
  - To the gauge water before mixing: CHRYSO® Fluid Premia 100 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 rotation to discharge at very slow revolutions. When the concrete has reached the mouth of the drum, stop the drum rotation. Place CHRYSO® Fluid Premia 100 on the concrete and not onto any exposed surface of the drum interior. Change the rotation direction of the drum to mixing and thoroughly mix the concrete at maximum permissible drum rpm, in order to ensure effective dispersion of CHRYSO® Fluid Premia 100 throughout the concrete. For each of the above recommendations, thorough mixing is essential to ensuring homogenous concrete. Once all mix components have been loaded/dispersed into a readymix drum, a guideline to mix at maximum permissible rpm, for a minimum of 1 minute per m<sup>3</sup>; therefore 6 m<sup>3</sup>= 6 minutes).

### Storage

- CHRYSO® Fluid Premia 100 has a shelf-life of 12 months starting from the date of manufacture - provided no other chemicals are added to it.
- The product should be stored away from the rain and frost in clean, dry tanks.
- Should the product freeze it will retain its properties. After thawing, it will be necessary to agitate thoroughly until a completely homogenous state is reached.
- Do not allow the product to be in high temperatures for long periods of time.

### Packaging

- Bulk tanker loads.
- 1 000 L flobin.
- 200 L bopak
- 25 L jerrycan

### 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 assist them with any problems encountered.