

CHRYSO®Omega 180 ZA

Water reducing plasticiser

Chryso
Concrete
Solutions

17/10/2024

DESCRIPTION

- **New generation, multi-dose,water reducing plasticiser**
- **CHRYSO® Omega 180 ZA** 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.

BENEFITS

- **CHRYSO®Omega 180 ZA** 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 180 ZA** allows concrete to exhibit extended workability characteristics.
- When used to reduce the water content of a concrete mix (lower the w/b ratio) **CHRYSO® Omega 180 ZA** may potentially reduce the rate of bleeding.
- **CHRYSO®Omega 180 ZA** improves the cohesion and lowers the viscosity of a concrete mix. This results in an improved homogeneity and compaction, allowing for superior off-shutter finishes.
- By reducing the need to add extra water, **CHRYSO®Omega 180 Z A** increases the durability of concrete, by reducing permeability.
- **CHRYSO®Omega 180 ZA** is robust to differences in cement characteristics. Based on aesthetic requirements, its suitability for use with white cement, should be ascertained prior to use.
- **CHRYSO®Omega 180 ZA** may be used with in mixes extended with limestone and/or typically used SCMs – GGBS, GGCS, Fly Ash and Silica Fume.
- **CHRYSO®Omega 180 ZA** does not undermine the early age strength of concrete and in certain cases, may be used to improve it.
- Depending on the dosage, **CHRYSO®Omega 180 ZA** will cause a relative increase of mechanical strength after 24 hours.

METHOD OF USE

- Typically ready-mix concrete and mechanically mixed site concrete.
- Low to high workability concrete.
- Conventionally placed concrete.
- Pumped concrete.
- Highly reinforced concrete.

Dosage :

The optimum dosage of **CHRYSO®Omega 180 ZA** 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.

Range:

- By volume: 0.3 to 1.5 litres per 100 kg of cementitious material (including extenders)
- By weight: 0.33 to 1.65 kg per 100kg cementitious material (including extenders)

Typical:

- By volume: 0.6 to 0.8 litres per 100 kg of cementitious material (including extenders)
- By weight: 0.66 to 0.88 kg per 100kg 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®Omega 180 ZA** should never be added to dry cement or to components of a mix that are dry.

PHYSICAL and CHEMICAL PROPERTIES

Product Nature	Liquid
Color	Brown
Lifetime	12 months
Water solubility	miscible

The information contained in this document is given to the best of our knowledge and is the result of extensive and controlled testing. However, it cannot under any circumstances be considered as a warranty involving our liability in the case of misuse. Tests should be conducted before the product is used to ensure that the methods and conditions of use of the product are satisfactory. Our specialists remain at the disposal of customers if they require help with the application of the product for their specific needs. za.chryso.com
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Halogen Dry Extract	27,50 % ± 2,00
Cl ⁻ Ions content	≤ 0,100 %
Equivalent Content NA ₂ O	≤ 2,00 %
pH	6,00 ± 1,00
Dry extract (EN 480-8)	27,50 % ± 2,000
Specific Gravity	1.095 ± 2
Viscosity	10-20 secs (Ford #4 Cup)

CHRYSO®Omega 180 ZA conforms to the requirements of SANS 50934-2 (EN 934-2) Table 2). These requirements are approximate equivalents of ASTM C494 Type A.

PACKAGING

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

- 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®Omega 180 ZA** 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®Omega 180 ZA** throughout the concrete. (a minimum of 1 minute 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).

PRECAUTIONS

Storage

- **CHRYSO®Omega 180 ZA** has a shelf life of 18 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®Omega 180 ZA** can be recovered by controlled thawing and agitation.

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.