

CHRYSO® Plast Omega 174

Water reducing plasticiser

Chryso
Concrete
Solutions

12/11/2024

DESCRIPTION

- **New generation, multi-dose, water reducing plasticiser**
- **CHRYSO® Plast Omega 174** is classified as a water reducing plasticiser according to SANS 50934-2 (EN 934-2) Table 2. 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® Plast Omega 174** 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 174** allows concrete to exhibit extended workability characteristics.
- When used to reduce the water content of a concrete mix (lower the w/b ratio) **CHRYSO® Plast Omega 174** may potentially reduce the rate of bleeding.
- **CHRYSO® Plast Omega 174** 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® Plast Omega 174** increases the durability of concrete, by reducing permeability.
- **CHRYSO® Plast Omega 174** 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® Plast Omega 174** may be used with in mixes extended with limestone and/or typically used SCMs – GGBS, GGCS, Fly Ash and Silica Fume.
- **CHRYSO® Plast Omega 174** does not undermine the early age strength of concrete and in certain cases, may be used to improve it.
- Depending on the dosage, **CHRYSO® Plast Omega 174** will cause a relative increase of mechanical strength after 24 hours.

METHOD OF USE

Application guidelines

Use

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

Dosage :

- The optimum dosage of **CHRYSO® Plast Omega 174** 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.

Typical:

- By volume: 0.3 to 1.5 litres per 100 kg of cementitious material (including extenders)
- By weight: 0.32 to 1.62 kg per 100 kg cementitious material (including extenders)

Range:

- By volume: 0.29 to 1.51 litres per 100 kg of cementitious material (including extenders)
- By weight: 0.31 to 1.63 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.

PHYSICAL and CHEMICAL PROPERTIES

Dry extract (EN 480-8)	25,50 % ± 2,000
Product Nature	Liquid
Color	Brown
Lifetime	12 months

Dispensing/mixing

- **CHRYSO® Plast Omega 174** should never be added to dry cement or to components of a mix that are dry.
- **CHRYSO® Plast Omega 174** can be added to concrete using one of the following methods: To the gauge water before mixing: **CHRYSO® Plast Omega 174** 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

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

CHRYSO Southern Africa (Pty) Ltd - Gauteng (head office): 26 Malcolm Moodie, Crescent, Jet Park, South Africa Tél.: +27 (0) 113959700

CHRYSO® Plast Omega 174

Water reducing plasticiser

Chryso
Concrete
Solutions

12/11/2024

Cl ⁻ ions content	≤ 0,100 %
Specific Gravity	1,075 ± 2
Viscosity	10 - 20
pH	5,5 ± 1
Halogen Dry Extract	25,5% ± 2
Dry extract (EN480-8)	25,5% ± 2

Standards

- CHRYSO® Plast Omega 174 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

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 Omega 174** 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 Omega 174** 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® Plast Omega 174** 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® Plast Omega 174** can be recovered by controlled thawing and agitation.

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.

Prior to any use, please read carefully the Material Safety Data Sheets.