

Technical data sheet - provisional

CHRYSO[®]ZA Plast HC

Plasticiser – Water reducer for extruded concrete with problematic aggregates

Description

CHRYSO[®]ZA Plast HC 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 on a concrete mix:

- Without affecting the consistence, 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.

Advantages

- Assists with problematic aggregates.
- In common with all water reducing/plasticising admixtures, the use of **CHRYSO[®]ZA Plast HC** 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 that is environmentally friendly.
- Improves both early and ultimate compressive strengths.
- These increased strengths considerably reduce curing times (savings on energy costs) and handling times (increasing productivity).
- Increases the compacting grade of the concrete when vibrated, allowing for superior finishes and reduces the slipping of strands.
- Allows for higher resistance to abrasion and more durable concrete thanks to reduced water absorption.
- Reduces shrinkage and concrete viscosity while enhancing cementitious hydration.
- Chloride free – will not promote or contribute to the corrosion of reinforcing steel in concrete.

Physical and chemical properties

- Physical state (@25°C): liquid
- Specific gravity (@25°C): 1.03 (±0.01)
- pH: 5.5 (±1)
- Cl⁻ ion content: nil
- Solids content: 15 – 20%
- Viscosity: 10 – 20 seconds (ford #4 cup)

Standards

CHRYSO[®]ZA Plast HC conforms to EN 934-2:2009 (table 2) and conforms to the requirements of ASTM C494 Type A and Type F.

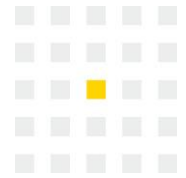
Application guidelines

Use

- Extruded concrete (particularly hollowcore)
- Steel reinforced concrete

Dosage

- The optimum dosage of **CHRYSO[®]ZA Plast HC** 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: 0.38 to 0.77 litres per 100 kg of cementitious materials (including Portland cement extenders)
 - By weight: 0.4 to 0.8 kg per 100 kg of cementitious material (including Portland cement extenders)
- Range:
 - By volume: 0.29 – 2.88 litres per 100 kg of cementitious materials (including Portland cement extenders)
 - By weight: 0.3 – 3 kg per 100 kg of cementitious materials (including



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Portland cement extenders)

Dispensing/mixing

- **CHRYSO®ZA Plast HC** is completely miscible in water.
- **CHRYSO®ZA Plast HC** should never be added to dry cement or components of the mix that are dry.
- **CHRYSO®ZA Plast HC** should preferably be added to the concrete before mixing the concrete but it can be added afterwards.
 - To the gauge water before mixing: should be added to approximately 90% of the concrete's totally gauge water requirements (including admixture). The remaining 10% of the concrete's total gauge water (without admixture) should be added in small increments until the target workability is achieved.
 - To the gauge water after mixing: should be added simultaneously with approximately 90% of the concrete's total gauge water requirement. The remaining 10% of the concrete's total gauge water (without admixture) should be added in small increments until the target workability is achieved.
- In all cases, thoroughly mix the concrete at maximum permissible drum rpm in order to ensure the effective dispersion of **CHRYSO®ZA Plast HC** throughout the concrete (a minimum of 1 minute per 1 cubic metre of concrete; therefore 6 cubic metres = 6 minutes)

Storage

- If in the original sealed packaging, **CHRYSO®ZA Plast HC** has a shelf life of up to 9 months from the date of manufacturing.
- **CHRYSO®ZA Plast** may freeze at temperatures below 2°C.

- Should the product freeze, it will recover its properties after thawing and agitating.
- Do not store the product at high temperatures (above 38°C) for long periods.

Packaging

- 25 l non returnable container
- 200 l non returnable container
- 1000 l flo-bins
- Bulk tanker loads

Health and safety

- This product is classified as combustible. **CHRYSO** will provide onsite assistance when requested. Refer to the material safety data sheet.