TECHNICAL DATA SHEET

CHRYSO CONCRETE SOLUTIONS

18/12/2020

# CHRYSO®Fluid Optima 100

Water reducing Plasticizing admixture

## DESCRIPTION

CHRYSO®Fluid Optima 100 is a plasticizer – water reducer which works as a new generation superplasticizer based on modified phosphonate. Its specifically designed molecular structure gives it exceptional properties as a concrete additive. Using CHRYSO®Fluid Optima 100 results extensive workability at all levels of consistency, compared to standard additives. In this respect, CHRYSO®Fluid Optima 100 is particularly adapted to the pumping of concrete over long distances.

CHRYSO®Fluid Optima 100 is compatible with most types of cement. In most cases, it is the solution to cement / admixture incompatibility. On account of all these characteristics, CHRYSO®Fluid Optima 100 is a superplasticizer which is particularly adapted for use on construction sites and in the ready mix concrete industry.

## FIELDS OF APPLICATION

- Pumped concrete
- High Performance Concrete - Very High Performance Concrete
- Concrete for highly reinforced structures
- Prestressed concrete
- All cement types
- Hot weather concreting
- Extended workability retention
- 3AZ98

## INDICATIVE INFORMATION

| | |
|---|---|
| **Product Nature** | liquid |
| **Color** | Translucent yellow |
| **Lifetime** | 9 months |
| **Freezing Point** | -3 °C |

## SPECIFICATIONS

| | |
|---|---|
| **Halogen Dry Extract** | 30,20 % ± 1,50 |
| **$Cl^-$ Ions content** | ≤ 0,100 % |
| **Equivalent Content $NA_2O$** | ≤ 0,30 % |
| **Specific gravity (20°C) in kg/dm3** | 1,061 ± 0,020 |
| **pH (20°C)** | 4,70 ± 1,00 |
| **Dry extract (EN 480-8)** | 31,00 % ± 1,500 |

## METHOD OF USE

- A 1.0% dosage of the product of the weight of cement is commonly used.
- This product is completely miscible in water.
- This product must be added to the mixer with the mixing water.
- The product can also be added later on site.
- The optimum dosage of this product can only be established after trial tests, taking into account the rheological characteristics and the required mechanical performances of the concrete.
- Dependant on application this product can be used in conjunction with some other CHRYSO® admixtures.

**Dosage :**

0.3 to 5.0 kg for 100 kg of cement.

## PRECAUTIONS

- Protect from frost.
- Avoid prolonged exposure to high temperatures.
- Should the product freeze, it will recover its properties. After thawing, an efficient agitation is necessary until the product is entirely homogeneous again.

## SITE REFERENCES

Surface retarded concrete. Rion-Antirion bridge, Greece. Excavation shaft for the gold mine of Moab Khotsong, South Africa: shotcrete and concrete pumped over long distances. uShaka Marine World in Durban, South Africa: pilars and water retention structures. Tamarins road, Reunion island: many works structures along the road. Viaducts over Motorway A85 (Ingrandes aka "La Perrée" and Roumer), France. Port 2000 Le Havre - 1st and 2nd phases,



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## NORMATIVE AND REGULATORY INFORMATION

- This product conforms to CE marking. The appropriate declaration can be found on our internet site.
- This product conforms to NF 085 certification, which technical specifications are those applied in the non harmonised part of NF EN 934-2.

## TEST SITE

Workability retention

France: diaphragm walls and docking mask. Nelson Mandela Bridge, South Africa: 4 concrete formulations for the different elements of the bridge. Brault Lock, France: concrete pumped under water. Tunnel of Marseilles (TGV Med), France: World record of pumping concrete over long distances = 2,719.65 m. Pic du Midi (South Peak) Observatory, France: European record of pumping concrete in altitude (2,850 m). Viaduct of Barrails, France: prestressed concrete ring segments.

## SECURITY

Before use, see MSDS.



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