CHRYSO®Optima 100

Water reducing Plasticizing admixture

CHRYSO®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®Optima 100** results extensive workability at all levels of consistency, compared to standard additives.
In this respect, **CHRYSO®Optima 100** is particularly adapted to the pumping of concrete over long distances.
CHRYSO®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®Optima 100** is a superplasticizer which is particularly adapted for use on construction sites and in the ready mix concrete industry.

Indicative characteristics

- Nature: liquid
- Colour: Cream
- Specific gravity (20° C): 1,060 ± 0,010
- pH: 4,00 ± 0,50
- Solid content (halogen): 30,00% ± 1,50%
- Solid content (EN 480-8): 31,00% ± 1,50%
- Na_2O equivalent: ≤ 0,30%
- Cl^- ions content: ≤ 0,10%
- Freezing point: -3 °C
- Shelf life: 9 months

Norms and regulations

- 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.

Domains of application

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

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.

Method of use

Dosage: 0.3 to 5.0 kg for 100 kg of cement.

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.

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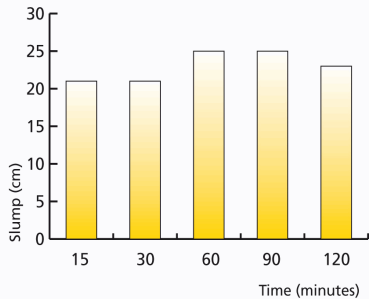
Dependant on application this product can be used in conjunction with some other CHRYSO® admixtures.

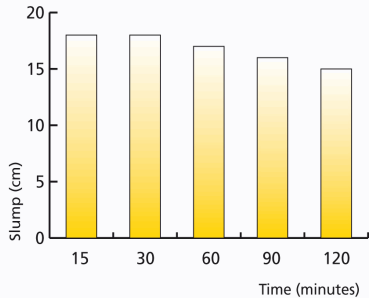
Tests

Workability retention

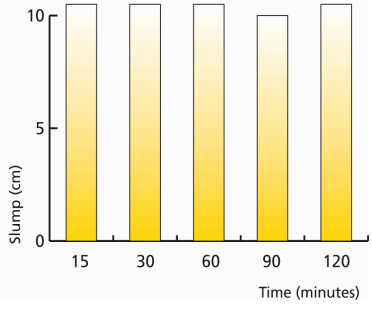
Graph A
CEM III 32,5 **CHRYSO®Fluid Optima 100**
dosed at 1.5 %



Graph B
CEM I 52,5 **CHRYSO®Fluid Optima 100**
dosed at 0.8 %



Graph C
CEM II 32,5 **CHRYSO®Fluid Optima 100**
dosed at 0.6 %



Construction sites 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, 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.

Safety

This product is classified as "harmless". In case of exposure, it is recommended to wear your protective equipment.
Before use, refer to the safety data sheet on our internet site www.chryso.com

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