

# CHRYSO<sup>®</sup> Silica MS85

## Ultrafine Densified Silica



### Description

**CHRYSO<sup>®</sup> Silica MS85** is a densified Silica, mineral admixture formulated to produce concrete with special performance qualities. It improves the hardened properties of concrete.

It is a pozzolana which reacts chemically within the concrete to increase the amount of calcium silicate hydrate gel formed thus improving the strength and impermeability of the concrete.

### Indicative characteristics

Appearance	::	Grey Powder
Silica Content (as SiO <sub>2</sub> )	::	> 85% by mass
Alkali Content (as Na <sub>2</sub> O)	::	> 1.5% by mass
Loss on ignition	::	< 4% by mass
Moisture	::	< 3% by mass
Bulk Density Kg/m <sup>3</sup>	::	> 500
45 Micron Sieve passing	::	> 90% by mass
Specific Surface area	::	> 15m <sup>2</sup> /gm

### Advantages :

The reduced permeability of concrete produced with **CHRYSO<sup>®</sup> Silica MS85** greatly limits the ingress of water, chlorides, sulphates and aggressive chemicals known for promoting steel corrosion and other distresses in concrete structures.

Because of its pozzolanic and void-filling properties the addition of **CHRYSO<sup>®</sup> Silica MS85** to conventional concrete also provides ultra high compressive strengths. This allows for design flexibility, resulting in reduced member size, increased span lengths and improved overall structural economies. It is an ultra-fine material that when added to concrete, physically fills the voids between cement particles, resulting in an extremely dense and impermeable concrete.

It is also recommended that **CHRYSO<sup>®</sup> Silica MS85** be used with high range water reducing admixtures in **CHRYSO - Optima /Premia Range**.

### Domains of application

**CHRYSO<sup>®</sup> Silica MS85** aids in the production of concrete with the following qualities :

- High Performance Concrete
- Structural Concrete
- Precast Concrete
- Shotcrete & Concrete Blocks
- Low permeability Concrete
- Basement Structures
- Marine Structures
- Bridge Decks

### Precautions

Setting time of concrete is influenced by the chemical and physical composition of the concrete, temperature of the concrete, climatic conditions and the use of chemical admixtures. Trial mixes should be conducted to determine the dosage required for a specified setting time.

It is Non-toxic and formulated from chemicals which present no fire or health hazards.

### Method of use

**CHRYSO<sup>®</sup> Silica MS85** is recommended for use at an addition rate of 5 to 15% by weight of cement / Binder depending on the amount of strength increase and desired impermeability. The exact amount for strength or durability requirements should be determined by trial batches.

The above addition rate applies to most concrete mixes using average concrete ingredients. However, variations in job conditions and concrete materials may make addition rate outside the recommended range.

### Guideline Followed:

**ASTM C-1240 & IS:15388**

**Shelf Life:** 24 months from the date of manufacturing when stored in un-opened, original sealed and dry condition.

### Packaging

- 25kg waterproof laminated HDPE bag.

### Safety

Before use, refer to the Material Safety Data Sheet. The MSDS is available on [www.chryso.com](http://www.chryso.com).

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