

# Comtech C20

**Hyper superplasticizer with acceleration properties for early strength and self compacting concrete.**

## Description:

Comtech C20 a chloride free admixture based on modified organic polymers.

Comtech C20 is a high range superplasticizer and water reducing agent. Comtech C20 disperse and deflocculates cement particles thereby increasing workability and flowability.

It has been formulated to reduce water in concrete mixes and enhance its slumps with accelerating effects.

It supplied as clear yellowish liquid.

Normal flow and slump characteristics can be maintained with reduced water content in the concrete mix. The possibility of high levels water reduction allows a major increase in strength.

## Primary uses:

- Precast concrete where early demolding of the formworks is required.
- Dry concrete mixes.
- Self compacting concrete.
- Cold weather concreting.
- For the production of self compacting concrete.
- To produce concrete with high ultimate strength and low water content.
- Concrete with microsilica.
- Allows the production of very flowable concrete, with a low water/cement ratio up to 30%.

- Improves concrete workability with no loss in strength.
- Due to the reduction in the water/cement ratio, all other properties of hardened concrete improve significantly, mainly compressive & flexural strengths, impermeability, shrinkage and creep.
- Improve surface appearance.
- Up to 25% water reduction or 18 Cm slump increase.
- At addition rate of 6 Liter Comtech C20 allows to save cement of 15% in comparison to the concrete at the same slump and strength.
- Higher early and ultimate strengths.
- Improves concrete workability with no loss in strength.
- Improves cohesiveness and reduces concrete segregation.
- Produces concrete with lower permeability.
- Concrete achieves higher durability.
- Allows concrete placement in difficult access or heavily reinforced areas.

## Compatibility:

Comtech C20 is compatible with all types of cements (including Sulphate resisting) and cement replacement materials such as microsilica and granulated furnace slag.

When used with other concrete admixture contact comtech representative for approval, any other admixtures should be added separately and should not be mixed together prior to addition.



### **Standards:**

ASTM C-494 Type C.

### **Packaging and storage:**

Comtech C20 is supplied in bulk or 210 liter drums; All Comtech Concrete Admixtures should be stored in a dry shaded area, protected from breakage, deterioration and contamination.

### **Typical properties:**

Appearance: Clear liquid.

Air entrainment: Nil.

Chloride content: Nil to BS 5075.

### **Method of use:**

Comtech C20 is supplied ready for use; it should be added to concrete mixes during the wet mixing cycle.

The accurate quantity of Comtech C20 could be measured by means of a recommended scale.

Full blending of Comtech C20 with the concrete should be ensured by high speed mixing for at least two minutes.

### **Dispensing:**

It is recommended to disperse Comtech C20 after adding 70% of the gauging water. Don't add C20 to dry cement.

### **Dosage:**

The optimum dosage of Comtech C20 should always be determined by trial mixes using the same materials and conditions that will be used in the concrete mix.

The normal dose of Comtech C20 is from 0.7 to 1.75 liter per 100 Kg of cement, other dosages may be used depending on the materials and conditions.

For best results the use of 4 liter or more of Comtech C20 per 1m<sup>3</sup> of concrete is recommended.

The effect of overdosing will result in slight increase in air entrainment comparing to the normal conditions.

### **Health and safety:**

Comtech C20 does not classified in the hazardous materials; however it should not be allowed to come into prolonged contact with skin and eyes.

The normal safety precautions (hand gloves & safety goggles) are recommended for handling.

The first aid if some harm happened with eyes in to wash with water.

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Users should always refer to the most recent issue of the technical data sheet for the product concerned, copies of which will be supplied on request.