

## VARAPLAST SP 50

### SUPERPLASTICISING, HIGH RANGE, WATER REDUCING ADMIXTURE

#### DESCRIPTION

**VARAPLAST SP 50** is a chloride free, Superplasticising admixture based on selected synthetic polymers. It is supplied as a brown solution which is instantly dispersible in water.

**VARAPLAST SP 50** can provide very high level of water reduction and hence major increase in strength can be obtained coupled with good retention of workability to aid placement.

#### USES

- ◆ **VARAPLAST SP 50** can provide self-leveling concrete practically eliminating the need for vibration during placing.
- ◆ **VARAPLAST SP 50** provides excellent workability even at low water/cement ratio.
- ◆ **VARAPLAST SP 50** is especially recommended for use in high workability concrete and where fast shutter removal is required.

#### ADVANTAGES

- ◆ **Increased Workability** : Reduces placing time, labour and equipment.
- ◆ **High Strength Concrete** : Water reduction gives higher strengths without cement increase or workability loss.
- ◆ **Workability Retention** : Good workability retention.
- ◆ **Reduced Permeability** : Reduction of water reduces porosity giving improved water impermeability.

- ◆ **Surface Finish** : Better dispersion of cement particles and increased cohesion minimises segregation and bleeding and gives improved surface finish.
- ◆ **Improved Pumpability** : Line friction is reduced by increasing workability and cohesion.
- ◆ **Chloride Free** : Safe in reinforced concrete.

#### STANDARDS

**VARAPLAST SP 50** complies with **BS 5075 – 1982** and **ASTM C494 Type G. IS 9103 -1999**

#### TYPICAL PROPERTIES

- ◆ **Calcium Chloride Content** : Nil
- ◆ **Specific Gravity** : 1.22 at 25°C.
- ◆ **Air Entrainment** : Less than 1% additional air is entrained.
- ◆ **Setting Time** : 1 to 2 hours retardation at normal dosage.
- ◆ **Chloride Content** : Nil to **BS 5075**.
- ◆ **Cement Compatibility** : Compatible with sulphate resisting and other Portland cements, high alumina cements and cement replacement materials such as **PFA, GGBFS** and **Microsilica**.
- ◆ **Durability** : Water reduction gives increase in density and water impermeability which improves durability.

## INSTRUCTIONS FOR USE

**Dosage** : The optimum dosage for **VARAPLAST SP 50** should be determined by site trials with actual site conditions.

**As a guide the dosage is normally:**

0.50 - 1.0 litres/100 kg cementitious material, for flowing concrete.

0.80 - 1.50 litres/100 kg cementitious material, for high strength concrete.

**Overdosing** : An overdose of double the intended amount of **VARAPLAST SP 50** will result in very high workability as compared to that normally obtained. Provided that adequate curing is maintained, the ultimate compressive strength will not be impaired.

## TECHNICAL SUPPORT

'AKARSH' provides technical support service on mix design, admixture selection, evaluation of trials, dispensing equipment etc. Please contact the Technical Department in these cases.

**Curing** : As with all structural concrete, normal curing methods apply.

## PACKAGING

**VARAPLAST SP 50** is supplied in 250 kgs drums.

**Cleaning** : Spillages of **VARAPLAST SP 50** can be removed with water.

**Storage** : **VARAPLAST SP 50** should be protected from extremes of temperature. Should the material become frozen, it must be completely thawed and thoroughly mixed before use. **VARAPLAST SP 50** has a minimum shelf life of 12 months provided temperature is kept within the range 5° C to 30° C.

## HEALTH & SAFETY

**VARAPLAST SP 50** is non-toxic. Any splashes to the skin should be washed immediately with water. Splashes to the eyes should be washed immediately with water and medical advice should be sought.

**Fire** : **VARAPLAST SP 50** is non flammable.