

## VARAPLAST SP 20

### SUPERPLASTICISING, HIGH RANGE, WATER REDUCING ADMIXTURE

#### DESCRIPTION

**VARAPLAST SP 20** is a chloride free, super plasticising admixture based on selected synthetic polymers. It is supplied as a brown solution which is instantly dispersible in water.

**VARAPLAST SP 20** 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 20** can provide self-leveling concrete practically eliminating the need for vibration during placing.
- ◆ **VARAPLAST SP 20** provides excellent workability even at low water/cement ratio.
- ◆ **VARAPLAST SP 20** 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 without set retardations
- ◆ **Reduced Risk of Retardation:** Normal set without retardation even if accidentally overdosed.
- ◆ **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 20** complies with **BS 5075 – 1982** and **ASTM C494 Type G. IS 9103 -1999**

#### TYPICAL PROPERTIES

- ◆ **Calcium Chloride Content :** Nil
- ◆ **Specific Gravity:** 1.20 at 25° C.
- ◆ **Air Entrainment:** Less than 1% additional air is entrained.
- ◆ **Setting Time:** No 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 20** 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 20** 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 20** is supplied in 200 litre/250 kgs drums.

**Cleaning:** Spillages of **VARAPLAST SP 20** can be removed with water.

**Storage:** **VARAPLAST SP 20** should be protected from extremes of temperature. Should the material become frozen, it must be completely thawed and thoroughly mixed before use. **VARAPLAST SP 20** has a minimum shelf life of 12 months provided temperature is kept within the range 5° C to 30° C.

## HEALTH & SAFETY

**VARAPLAST SP 20** 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 20** is non flammable.