

Conflo Bond-SP1

Superplasticising admixture

Uses

To produce high workability concrete without loss of strength. To promote high early and ultimate strengths by taking advantage of water reduction whilst maintaining workability.

To produce high quality concrete of improved durability and impermeability.

At higher dosages, advantages can be taken of the retardation of initial setting time of concrete especially in large pours.

Advantages

- Pumpability : Increased workability provides easier and quicker placing and optimum compaction. Aids concrete placement by pump.
- Increased strength : Provides higher strength without increase in cement content or reduction in workability. Ideal for precast concrete production.
- Improved quality and cohesion : Reduce rate of workability loss normally associated with superplasticiser. Reduces shrinkage cracking because of lower water cement ratio. Makes the concrete water impermeable.
- Bleeding and segregation minimised : Improves durability and impermeability of concrete.
- Chloride free : Safe in prestressed concrete production.

Standards compliance

Conflo Bond-SP1 conforms to IS:9103 : 1999 as a water reducing admixture and carries license from Bureau of Indian Standards. It also complies with IS 2645 : 1975 and BS 5075 Part 3 and ASTM C494 Type F.

Description

Conflo Bond-SP1 is based on a blend of specially selected organic polymers. It is supplied as a dark brown liquid, instantly dispersible in water. Conflo Bond-SP1 disperses the cement particles effectively in the concrete mix and hence exposes a larger surface area to the hydration process. This effect is used either to increase the strength or to produce high workability concrete or reduce cement content of concrete or to retard the setting time of concrete.

Properties

Specific gravity : 1.18 to 1.20 at 270C

Chloride content : Nil to IS:456

Setting times : At higher dosage levels without water reduction, retards setting times 1 - 2 hours approximately.

Air entrainment : Approximately 1% additional air is entrained.

Compatibility : Can be used with all types of Portland and slag cement except High Alumina Cements.

Workability : Conflo Bond-SP1 can be used to produce collapse slump concrete without reducing the water content. However, minor adjustments to mix design may be required to produce flowing concrete to prevent bleeding and segregation.

Compressive strength : Substantial reduction in the water content (10-20%) can result in high early compressive strength for a constant slump.

Permeability : Reduced water/cement ratio increases density and improves impermeability. Improved workability facilitates easy placing and good compaction.

Cohesion/segregation : The possibility of bleeding and segregation will be reduced because of increase in cohesion. A uniform close textured surface without sand runs or voids can be produced.

Pumpability : Conflo Bond-SP1 will aid pumping of concrete by providing lubrication to cement particles and reducing line friction.

Application instructions

The optimum dosage of Conflo Bond-SP1 should be determined by site trials with a specific concrete mix to facilitate measurement of effects of workability and strength gain. As a guide, the rate of addition should be in the range of 500ml to 1.5 litres /100 kg cement for high workability concrete.

Overdosing : The overdose of double the recommended dosage can result in increased acceleration of setting time and additional air is entrained which may lead to slight loss in strength.

The ultimate strength of the concrete could be increased if advantage is taken of the increased workability by reducing water.

Curing

Normal curing methods such as water ponding / spray or wet hessian must be used.

Estimating

Packaging

Conflo Bond-SP1 is supplied in 5,20 and 200 litre containers.

Storage

Shelf life

Conflo Bond-SP1 has a shelf life of 12 months from the date of manufacture provided the temperature is within the range of 20C to 40 0C.

Precautions

Health & Safety

Conflo Bond-SP1 is non-toxic, non-flammable and splashes to the skin should be washed with copious amounts of water. If contact with eyes occurs, wash well with water immediately and seek medical advice.