

Conflo Bond-P2

Conflo Bond-P2 constructive solutions

Water reducing admixture

Uses

Conflo Bond-P 2 is a high performance plasticiser which allows large water reductions resulting in significant increase in early and ultimate strengths. Increased workability can be achieved without loss in strength. Conflo Bond-P2 can be used as a retarding water-reducing admixture at higher dosages.

Advantages

- Increased strength : Water reduction of upto 10% leads to high ultimate strength without increase in cement content.
- Improved durability : Improves durability by increasing density and lowering permeability. Reduces shrinkage cracking because of lower water cement ratio.
- Speeds up construction : Greatly improves workability which enable easier and quicker placing and optimum compaction.
- Larger Pours : Extended setting times at higher dosages enable large volume of concrete to be placed thus avoiding cold joints
- Compatibility : Conflo Bond-P2 can be used with all types of Portland cements.
- Chloride free : Safe in prestressed concrete and with sulphate resisting cements and in marine conditions.

Standards compliance

Conflo Bond-P2 complies with the requirements of BS:5075 part 1 and ASTM C494 types A & D as well as IS 9103 1999.

Description

Conflo Bond-P2 is a formulated blend of polymeric materials based on hydrolysed carbohydrate derivatives. It is designed to give maximum cement particle dispersion without producing unwanted side effects. This results in good, dense concrete having exceptionally high strength.

Conflo Bond-P2 acts as a normal water reducing admixture at low to medium dosage rates. At higher dosages, it acts as a retarding plasticiser. The amount of retardation will also depend on chemical composition of the cement and concrete temperature.

Properties

Specific gravity : 1.21 - 1.220 @300C

Chloride content : NIL to IS 456

Air entrainment: Less than 1% additional air is entrained

Workability : The addition of Conflo Bond-P2 without reduction in the water content, increases the slump and significantly improves concrete flow characteristics without decrease in concrete strength.

Setting time : Initial and final setting times will relate to cement type and ambient temperature. But typically the initial setting is extended between 1 to 4 hours depending upon dosage and temperature at constant workability.

Compressive strength : Table 1 shows typical results where increased workability is obtained at original water cement ratio and increase in strength where workability is maintained and water cement ratio reduced.

Durability : Where the water reducing properties of Conflo Bond-P2 are utilised, there is increase in density, durability and the resistance of concrete to attack by aggressive agents. The reduced water cement ratio makes concrete less permeable.

Application instructions

Dosage

The optimum dosage determined by site trials with a specific concrete mix which enables the effects of workability, strength gain and setting time to be measured. The rate of addition of Conflo Bond-P2 is typical between 160ml to 500ml per 100kg cement. At dosages beyond 400ml per 100 kg of cement, it may act as a retarding plasticiser.

Overdosing

Any overdosing of Conflo Bond-P2 can result in increased retardation of the initial set of the concrete. The ultimate strength of the concrete will not be affected and 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

Packing

Conflo Bond-P2 is supplied in 200, 20 and 5 litre containers.

Storage

Conflo Bond-P2 has a shelf life of minimum 12 months when stored under normal temperatures. It should be protected from extremes of temperatures and preferably stored in shade.

Precautions

Health and safety

Conflo Bond-P2 is non-toxic, non-flammable and splashes on skin should be removed by copious amounts of water. If contact with eyes occurs, wash well with water immediately and seek medical advice.