

CONFLO BOND-R

Retarding admixture

Uses

The unique dual function of Conflo Bond-R improves both mixing water efficiency and delays initial set of concrete mixes. This improvement can be utilised to provide increased strength, density and workability without increase in cement, whilst retardation of setting times enables avoidance of 'cold joints' where delays in transporting and placing concrete occur.

Towers, chimneys, high buildings, slipform structures, tunnel/shaft lining, offshore construction and in-situ piles.

Advantages

Easy pumping - improves workability, cohesion and extends setting time, Provides protection against delays and stoppages.

In-situ Piling - Avoidance of 'cold joints', helps easy casing removal.

Ready mixed concrete - Increased workability and extended setting times minimizes risks associated with long distance deliveries in hot weather.

Slip forming - Facilitates keeping a workable concrete 'face' under difficult conditions.

Larger pours - Possible with extended placing and compaction times and avoidance of 'cold joint'.

Increased ultimate strength - Higher strengths without increase in cement content or reduction in workability.

Cement savings - Can be obtained by maintaining original strength and workability

Improved cohesion - Reduces bleeding and segregation where poor sand grading are unavoidable.

Standards compliance

Conflo Bond-R conforms to IS:9103-1999 as a retarding admixture.

Description

Conflo Bond-R is a dark brown liquid based on selected lignosulphonates. When added to concrete mixes the admixture is absorbed onto the cement particles. It then acts as a dispersing agent which breaks down agglomerates of cement particles and enables the water in the mix to perform more efficiently.

Conflo Bond-R delays the initial hydration of the cement which results in retardation of the setting time. However, once the concrete has undergone initial set, the hardening process continues normally.

Properties

Chloride content : Nil to IS456

Specific gravity : 1.170 - 1.190 at 27 °C

Compatibility : Compatible with all types of cements.

Conflo Bond-R is generally compatible with other admixtures, which should be added to the mix separately and site trials should generally be carried out.

Cohesion / Segregation : Improved dispersion of cement particles increases cohesion properties and reduces the probability of segregation and sand runs.

Permeability : Improved workability facilitates placing and compaction. Reduced water cement ratio increases density and makes the concrete more waterproof.

Compressive strength : Table 1 shows typical results where increased workability is obtained at original W/C and increase in strength where workability is maintained and W/C reduced.

Conflo- R

Application instructions

Dosage

Conflo Bond-R will normally be added at a rate between 0.1 and 0.30 litres /50 kg cement depending on the slump and retardation required. Site trials should be carried out to determine optimum dosage. If used for cement reduction without loss in strength the dosage is normally 0.15 litres /50 kg cement.

Dispensing

The correct quantity of Conflo Bond-R should be measured by means of an accurate and recommended dispenser. The measured quantity of the admixture should be added directly to the mixer at the same time as the mixing water. Under no circumstances should Conflo Bond-R be added to the dry

mix. If mixing water is added in more than one stage, add Conflo Bond-R in the last stage.

Curing

Efficient concrete curing is essential and is best achieved by use of Concure WB spray applied curing compound. If traditional methods such as water spray or wet hessian are used, they must be carried out thoroughly.

Overdosing

An overdose of double the recommended measure of Conflo Bond-R will result in increased retardation but the ultimate strength of the concrete will not be reduced and could be increased if advantage is taken of the increased workability.

Estimating

Packaging

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

Storage

Minimum shelf life of 12 months provided the temperature has not exceeded 20C to 50C. If this range is exceeded in any respect, advice should be sought from the supplier.

Precautions

Health & Safety

Conflo Bond-R is non-toxic, non-inflammable; any splashes should be washed well with water. If contact with eyes occurs it shall be washed immediately with water and medical advice sought immediately.