

Conplast® RP264(RMC)



constructive solutions

Set retarding Plasticiser

Uses

The unique dual function of Conplast RP264 (RMC) 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.

The typical application includes structures like Towers, chimneys, highrise buildings, tunnel/ shaft lining, offshore construction and in-situ piles and all structures where slipform technology is employed.

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 minimises risks of long distance deliveries in hot weather.
- **Slipforming** - 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 gradings are unavoidable.

Description

Conplast RP264 (RMC) is a dark brown liquid based on modified lignosulphonates blend.

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.

Conplast RP264 (RMC) 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 : Less than 0.05% by weight

Specific gravity : 1.2 - 1.210 at 27 °C

Air entrainment : 1.5 - 2% additional air entrained at normal dosage rates, and type of coarse aggregates used.

Compatibility : Conplast RP264 (RMC) is generally compatible with other Conplast admixtures, which should be added to the mix separately and site trials should generally be carried out.

Setting times : Initial and final set times will be related to cement type and ambient temperature. Trials shall be carried out to arrive at approximate dosages to achieve desired retardation.

Cohesion / Segregation : Improved dispersion of cement particles increases cohesion properties and reduces 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. The impermeability of concrete at the lift joints can be eliminated by avoiding cold joints.

Compressive strength : The compressive strength with increased workability is obtained at reduced water cement ratio.

Application instructions

Dosage

Conplast RP264 (RMC) 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.

Dispensing

The correct quantity of Conplast RP264 (RMC) 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 Conplast RP264 (RMC) be added to the dry mix. If mixing water is added in more than one stage, add Conplast RP264 (RMC) in the last stage.

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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

Conplast RP264 (RMC) is sensitive to overdosing.

An overdose of double the recommended measure of Conplast RP264 (RMC) 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

Conplast RP264 (RMC) is supplied in 200 litre containers.

Storage

Minimum shelf life of 12 months provided the temperature has not exceeded 2°C to 50°C. If this range is exceeded in any respect, advice should be sought from the supplier.

Precautions

Conplast RP264 (RMC) is non-toxic, non-inflammable, any splashes should be washed well with water. If contact with eyes occur wash immediately with water and seek medical advice.

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