

SET-RETARDING ADMIXTURE FOR CONCRETE

Description

Conset R is a chloride free set-retarding admixture based on selected polyhydroxy materials. It is supplied as brown solution which instantly disperses in water.

Conset R effects the initial hydration of concrete, resulting in a delay in the setting time of the concrete with no adverse effect on subsequent stiffening and strength gain.

Uses

- To extend the setting time of concrete, extending
- Hot weather concreting
- Mass concreting
- Working times and minimising delay problems.
- To extend the working life of semi-dry concrete screeds
- Particularly suitable for use in mixes having fly ash and also improve the working life of semi dry concrete mixes, specifically RCC (Roller Compacted Concrete) type of mixes.

Advantages

- Controlled retardation extends working life and stiffening time for ease of construction
- Control of stiffening improves slip forming and assists in preventing the formation of cold joints in large pours
- Chloride free, safe for use in prestressed and reinforced concrete

Characteristics

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|----------------------|-------------------------------|
| Form | : Liquid |
| Colour | : Colourless to Brownish |
| Relative Density | : 1.15 ± 0.02 at 25°C |
| pH | : >6 |
| Chloride ion content | : Nil (As per BS 5075 Part I) |
| Air entrainment | : Negligible |

Standard Compliance

Conset R complies with BS 5075 Part 1 and with ASTM C494 as Type B and Type D.

Dosage

The optimum dosage of Conset R to meet specific requirements should always be determined by trials using the materials and conditions that will be experienced in use.

This allows the optimisation of admixture dosage and mix design and provides a complete assessment of the concrete mix. A starting point for such trials is to use a dosage within the normal typical range of 0.1 to 0.60 litres / 100 kg of cementitious material, including PFA, GGBFS or microsilica.

Effect of Overdosing

An overdose of double the intended amount of Conset R will result in a significant increase in retardation as compared to normally obtained at the intended dosage. Provided that adequate curing is maintained, the ultimate strength of the concrete will not be impaired by increased retardation and will generally be increased. The effects of overdosing will be further increased if sulphate resisting cement or cement replacement materials are used. An overdose will tend to increase the plasticising effect of the admixture. As concrete is normally batched to target workability, increased plasticising will allow an increased water reduction. This will have the effect of increasing ultimate strength and partially or fully offsetting the effect of any increased air entrainment. If no increase in water reduction is taken, and a significant rise in workability is allowed, the chance of segregation may be higher. Increased initial workability will tend to extend the working life of the concrete, which will delay finishing and stiffening times to some extent. Over dosage may also lead to reduced mix cohesion and may cause segregation and bleeding, particularly in high workability mixes. The degree of this effect will depend on the particular mix design and overdose level.

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Application Methodology

Application Instructions:

Compatibility:

Conset R is compatible with other FCSC admixtures used in the same concrete mix. All admixtures should be added to the concrete separately and must not be mixed together prior to addition. The resultant properties of concrete containing more than one admixture should be assessed by the trial mix to ensure that effects such as unwanted excessive retardation do not occur.

Conset R is suitable with all types of ordinary Portland cements and cement replacement materials such as PFA, GGBFS and silica fume. Further information on such usage is provided elsewhere on this datasheet.

Dispensing:

The correct quantity of Conset R should be measured by means of a recommended dispenser. The admixture should then be added to the concrete with the mixing water to obtain the best results. FCSC shall be contacted for advice regarding suitable equipment and its installation.

Curing

As with all structural concrete, good curing practice should be maintained, particularly in situations where an overdose has occurred. Water spray, wet hessian or a Curewell spray applied curing membrane should be used.

Packaging

Conset R is available in 250 Kgs containers.

Storage and shelf life

Conset R has min. shelf life of 12 months provided the temperature is kept within the range of 15°C to 40°C. Should the temperature of the product fall outside this range then FCSC shall be consulted.

Safety Precautions

Conset R does not fall into the hazard classifications. However, it should not be swallowed or allowed to come into contact with the skin and eyes.

Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with the eyes it shall be rinsed immediately with plenty of water and medical advice sought immediately. If swallowed, medical attention shall be sought immediately - Vomiting should not be induced.

Note

All Technical Data Sheets are updated on regular basis; it is the user's responsibility, to obtain the most recent issue.

Field services where provided, does not constitute supervisory responsibility, for additional information contact our local FIRSTCHOICE SPECIALITY CHEMICALS PRIVATE LIMITED representative.

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