

# NOVATECH R

## Retarding and Water-reducing Superplasticiser

### Description

**Novatech R** is a chloride-free liquid based on hydroxycarboxylic acid derivative which instantly disperses in water.

**Novatech R** disperses the fine particles in the concrete mix, enabling the water content of the concrete to perform more effectively. This effect can be used to improve workability, to increase ultimate strengths or to facilitate a reduction in the cement content.

The retarding properties of **Novatech R** can also be beneficial in concrete where high cement content or high temperatures are involved. **Novatech R** is particularly suitable for cohesive and cement rich mixes.

### Uses

To increase the workability and/or strength of concrete of a given cement content whilst increasing its initial and final setting time. To facilitate the production of high-quality concrete of improved durability and water tightness.

### Advantages

- ✓ Set retardation allows extra placing time for larger pours
- ✓ Increased workability facilitates placing and compaction
- ✓ High strengths without increase in cement content reduction in workability
- ✓ Strength specifications and workability can be maintained with less cement
- ✓ Set retardation controls stiffening time of concrete in hot weather

### Standard Compliance

**Novatech R** conforms with BS 5075 Part 1, ASTM C494 Type D and BSEN 934-2.

### Compatibility

**Novatech R** is suitable for use with all types of Portland cements and cement replacement materials such as PFA, GGBFS and micro silica.

### Technical Properties

Appearance	Brown liquid
Water soluble chloride, BSEN 934-2	Nil
Alkali content, BSEN 934-2	Typically, less than 30 g Na <sub>2</sub> O equivalent per litre of admixture

### Dosage

The optimum dosage of **Novatech R** to meet specific requirements should always be determined by trials using the materials and conditions that will be experienced in use. The normal dosage range is 0.3 L to 0.6 L per 100 kg of cementitious material, including PFA, GGBFS or micro silica.

Dosages outside the normal range quoted above can be used to meet particular mix requirements.

### Effects of Overdosage

An overdose of double the intended amount **Novatech R** will result in a significant increase in retardation as compared to that 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.

### Instructions for use

#### Retardation

The level of retardation obtained may be varied by altering the dosage of **Novatech R** used, this will also alter the level of water reduction obtained. Retardation is also affected by factors other than the admixture, depending on the mix details and conditions involved. Major factors include the following:

- a) Cement replacement materials and SRC cements will usually give greater levels of retardation than concrete mixes made with ordinary Portland cement at the same admixture dosage. Trials need to be conducted to establish the required dosage.

- b) High temperatures will require increased dosages to obtain the same change in stiffening time compared to a control mix.
- c) Changes in cement content, source or chemistry may lead to variations in the retardation obtained. The amount of tricalcium aluminate in the cement has been identified as being one of the main contributory factors in this respect, with a lower level leading to greater retardation.
- d) The use of a combination of admixtures in the same concrete mix and/or cement replacements may alter the setting time. Trials should always be conducted to determine such setting times.

### Dispensing

The correct quantity of **Novatech 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.

### Packaging

200 kg HDPE barrels or in bulk tankers on request.

### Shelf life

If stored in unopened containers within the temperature range of 2°C to 50°C, it has a shelf life of approximately 12 months.

**Freezing point:** Approximately, -4°C.

### Fire

**Novatech R** is water-based and nonflammable.

### Precautions

#### Health and Safety Instructions

**Novatech R** has no specific health hazards; it does not fall into the hazard classifications of current regulations. However, it should not be swallowed or allowed to come into contact with skin or eyes.

Before use, refer to the Material Safety Data Sheet (MSDS). The MSDS is available on [www.ccichemicals.in](http://www.ccichemicals.in) or contact us at [info@ccichemicals.in](mailto:info@ccichemicals.in).

### Cleaning and Disposal

Spillage of **Novacast 900 M** should be absorbed onto sand, earth or vermiculite and transferred to suitable container. Remnants should be hosed down with a large quantity of water.

The disposal of excess or waste material should be carried out in accordance with local legislation under the guidance of the local waste regulatory authority.

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