

## TECHNICAL DATA SHEET

### **RITEMIX SPR193**

*Superplasticizing, High Range Water Reducing Admixture with Retarder*

#### PRODUCT DESCRIPTION

**RITEMIX SPR193** is a chloride free water reducing admixture based on selected lignosulphonate materials. It is supplied as a brown solution which instantly disperses in water.

**RITEMIX SPR193** disperses the fine particles in the concrete mix, enabling the water content of the concrete to perform more effectively. The initial hydration of the cement is also delayed, resulting in a delay in the setting time of the concrete with no adverse effect on subsequent stiffening and strength gain.

#### CUSTOMER BENEFITS

- Water reduction significantly improves compressive strengths at all ages and enhances durability.
- 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.
- Minimized transportation delay problems, maintains place-ability and reduces the risk of pump blockage.
- Slight air entrainment improves cohesion in mixes with poorly graded sands or a lack of fine material, minimizing bleed and segregation.
- Allows specified strength grades to be met at reduced cement content or increased workability.
- Chloride free, safe for use in pre-stressed and reinforced concrete.

#### RECOMMENDED FOR:

- To improve the effectiveness of the water content of a concrete mix.
- To help maintain the workability of ready-mixed concrete deliveries in hot weather.
- To extend working times of concrete.
- Particularly suitable for use in mixes with low cohesion.

#### Standards compliance

**RITEMIX SPR193** conforms with ASTM C494 as **Type B and Type D.**

#### Dosage

The optimum dosage of **RITEMIX SPR193** 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 to 0.8 liters/100kg.

#### Use at other dosages

Dosages outside the typical range quoted above may be used if necessary and suitable to meet particular mix requirements.

Contact Technical Department for advice in these cases.

#### Instructions for use

##### Retardation

The level of retardation obtained may be varied by altering the dosage of **RITEMIX SPR193** used, which 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.
- 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 tri-calcium 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 may alter the setting time. Trials should always be conducted to determine such setting times.

##### Compatibility

**RITEMIX SPR193** is compatible with other Magna Prime admixtures used in the same concrete mix. All admixtures should be added to the concrete separately and must not be premixed together prior to addition. The resultant properties of concrete containing more than one admixture should be assessed by the trial mixes.

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**RITEMIX SPR193** is suitable for use with all types of Portland cements and cement replacement materials. 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 **RITEMIX SPR193** should be measured by means of a recommended dispenser. Normally, the admixture should then be added to the concrete with the mixing water to obtain the best results. Contact Magna Prime for advice regarding suitable equipment and its installation.

#### **Effects of overdosing**

An overdose of double the intended amount of **RITEMIX SPR193** 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.

#### **PACKAGING**

**RITEMIX SPR193** is available in 20 liters and 200liter (drums).

#### **Storage**

**RITEMIX SP193** has a minimum shelf life of 12 months provided the temperature is kept within the range of 2°C to 50°C. Should the temperature of the product fall outside this range contact Magna Prime for advice.

Freezing point: Approximately -4°C

#### **Precautions**

##### **Health and safety**

**RITEMIX SPR193** does not fall into the hazard classifications of current regulations. However, it should not be swallowed or allowed to come into contact with 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 eyes, rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately - **do not** induce vomiting.

For further information consult the Safety Data Sheet available for this product.

#### **Fire**

**RITEMIX SPR193** is water based and non-flammable.

#### **Cleaning and disposal**

Spillages of **RITEMIX SPR193** should be absorbed onto sand, earth or vermiculite and transferred to suitable containers. Remnants should be hosed down with large quantities 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.