

Conflo Bond-SP2\*

High performance superplasticising admixture

### **Uses**

- ❖ To provide excellent acceleration of strength gain at early ages and major increases in strength at all ages by significantly reducing water demand in a concrete mix. Particularly suitable for precast concrete and other high early strength requirements.
- ❖ To significantly improve the workability of site mixed and precast concrete without increasing water demand.
- ❖ To provide improved durability by increasing ultimate strengths and reducing concrete permeability.

### **Advantages**

- Major increases in strength at early ages without increased cement contents are of particular benefit in precast concrete, allowing earlier stripping times.
- Makes possible major reductions in water:cement ratio which allow the production of high strength concrete without excessive cement contents.
- Use in production of flowing concrete permits easier construction with quicker placing and compaction and reduced labour costs without increasing water content.
- Increased workability levels are maintained for longer than with ordinary sulphonated melamine admixtures.
- Improved cohesion and particle dispersion minimizes segregation and bleeding and improves pumpability.
- Chloride free, safe for use in prestressed and reinforced concrete.

### **Standards compliance**

Conflo Bond-SP2 conforms with BSEN 934-2, BS 5075 Part 3 and with ASTM C494 as Type A and Type F, depending on dosage used.

### **Description**

Conflo Bond-SP2 is a chloride free, superplasticising admixture based on selected sulphonated naphthalene polymers. It is supplied as a brown solution which instantly disperses in water.

Conflo Bond-SP2 disperses the fine particles in the concrete mix, enabling the water content of the concrete to perform more effectively. The very high levels of water reduction possible allow major increases in strength to be obtained.

### **Dosage**

The optimum dosage of Conflo Bond-SP2 to meet specific requirements should always be determined by trial mixes using the materials and conditions that will be experienced in use.

For high strength, water reduced concrete the normal dosage range is from 1.00 to 3.00 litres/100 kg of cementitious material, including PFA, GGBFS and microsilica. For high workability concrete the normal dosage range is from 0.70 to 2.00 litres/100 kg of cementitious material.

#### Effects of overdosing

An overdose of double the amount of Conflo Bond-SP2 will result in an increase in retardation as compared to that normally obtained. 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.

#### **Typical Properties**

Appearance : Brown liquid

Specific gravity: (BSEN 934-2) : 1.18 @ 22°C + 2°C

Water soluble chloride:(BSEN 934-2) : Nil

Alkali content : Typically less than 55g. Na<sub>2</sub>O (BSEN 934-2) equivalent/litre of admixture

#### Instructions for use

##### Mix design

Where the main requirement is to improve strengths, initial trials should be made with normal concrete mix designs.

The addition of the admixture will allow the removal of water from the mix whilst maintaining workability. After initial trials, minor modifications to the overall mix design may be made to optimise performance.

Where the main requirement is to provide high workability concrete, the mix design should be one suitable for use as a pump mix.

#### **Storage**

Conflo Bond-SP2 has a minimum shelf life of 12 months provided the temperature is kept within the range of 2°C to 50°C.

Freezing point: Approximately -2°C

#### Estimating - packaging

Conflo Bond-SP2 is available in 210 litre drums.

## **Precautions**

### Health and safety

Conflo Bond-SP2 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.

### Fire

Conflo Bond-SP2 is water based and non-flammable.