



BOND CHEMICALS  
Ultimate Chemistry

## Bond Polycarbo 4591

PCE based high range water reducing super-plasticizer for flowing concrete

### DESCRIPTION

**Bond Polycarbo 4591** consists of carboxylic ether polymer with long side chains linked to the polymer backbone; causing steric hindrance in addition to the traditional electrostatic repulsion. This enables admixture to disperse cement grains more effectively resulting in flowing concrete with reduced water content.

### RECOMMENDED USES

Bond Polycarbo 4591 significantly improves fresh and hardened concrete properties and is perfect for:

- High performance concrete
- Congested/Heavily reinforced sections
- Pumped concrete
- Ready mixed concrete
- High water reduction in concrete
- Concrete with high ratio of fines

### FEATURES AND BENEFITS

Bond Polycarbo 4591 has the following features and benefits:

- Ease in placing and finishing
- Higher early strength in concrete
- Better segregation resistance
- Higher initial slump and retention
- Self consolidating/flowing concrete

### PERFORMANCE TEST DATA

Appearance	Transparent hazy liquid
Specific Gravity	1.065 ± 0.005 at 25°C
pH	6.5 ± 1
Chloride ion content	< 0.2%

### STANDARD COMPLIANCE

- ASTM C-494 Type A., D and F
- BS 5075 Part 1

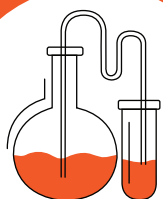
### DOSAGE

To determine the optimum dosage of Bond Polycarbo 4591, it is advised to conduct trials with different combinations of concrete ingredients.

As a guide, a dose of 0.7% to 2.0% by weight of cementitious material can be considered as a starting point.

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## APPLICATION

Bond Polycarbo 4591 is a ready-to-use liquid which can be dispensed into the concrete together with the mixing water.

The super plasticizing effect and water reduction are higher if the admixture is added to the damp concrete after 50 to 70% of the mixing water has been added.

Addition to dry aggregate or cement is not recommended.

## COMPATIBILITY

Bond Polycarbo 4591 is compatible with all cements, microsilica, fly ash, integral water proofers and air entraining agents complying ASTM standard requirements.

## PACKAGING

Bond Polycarbo 4591 is available in IBC (Intermediate Bulk Container) and drum having gross weight of 1,050 Kg and 210 Kg respectively.

## STORAGE /SHELF LIFE

Bond Polycarbo 4591 must be stored above 5°C.

Store under cover, out of direct sunlight and protect from temperature extremities.

Shelf life is 12 months from the manufacturing date, when stored as above. Failure to comply may result in premature deterioration of the product and packaging.