

# CasTech ES 510

High Performance Superplasticizer for Pre-cast Concrete  
Based on Poly-Carboxylate Ether

Technical Data Sheet  
issue 01/May 24

## Description

**Castech ES 510** is a high-performance concrete superplasticizer admixture based on modified polycarboxylate ether, specifically developed to provide the highest performance of water reduction for high strength concrete to achieve high early compressive strength, while providing excellent fluidity during placement.

**Castech ES 510** initially create the same electrostatic repulsion and further stabilizes the mixes due to static repulsion of long lateral chains linked to the polymer backbone.

## Uses

**Castech ES 510** was designed to produce super high strength concrete and flowable concrete in a variety of applications:

- Conventional concrete production
- Self-compacting concrete
- Hot weather concreting
- Pre-cast Industry
- Concrete containing micro silica, GGBS and PFA
- Concrete requiring long workability retention.

## Advantages

- Provides significantly higher strengths and normal set time.
- Produce concrete with high levels of workability without segregation.
- Increased water reduction and superior flow characteristics
- Has excellent concrete rheology and handling properties.
- Excellent flowability in self-compacting concrete.

## Typical Properties at 25°C

Property	Value
Appearance	Light Yellow Liquid
Specific Gravity	1.08 ± 0.02 @ 25 °C
Chloride Content	NIL to BS 5075

## Standard

**Castech ES 510** complies with ASTM C 494 Type F.

## Dosage

Dosage rates vary depending upon the amount of plasticity and/or water reduction desired. Recommended dosage range from 0.8 To 2.5 litres per 100 kg of total cementitious material. Other dosages may be recommended in special cases according to the specific site conditions. It is highly recommended that trial mixes be prepared to determine the optimum dosage for your specific performance requirements.

## Mixing

**Castech ES 510** is a ready to use liquid admixture to be added to the concrete as a separate component.

**Castech ES 510** is poured into the concrete mix right after the addition of at least 80% of mixing water, when all materials are wetted. Avoid adding the admixture to the dry aggregates.

### **Compatibility**

**Castech ES 510** is not compatible with naphthalene and melamine sulphonate based admixtures.

### **Storage and Shelf Life**

Up to 1 year in unopened original packing, protected from extremes of heat and cold and stored under shade.

### **Precaution**

**Castech ES 510** is not a fire or health hazard. Spillages should be washed down immediately with cold water. For further information refer to the Material Safety Data Sheet

### **Warranty**

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