ADVA® 690

New generation PCE-based superplasticiser

Product Description

ADVA®690 is the latest technology in the development of high range water-reducing superplasticising admixtures. It is an innovative, versatile, third-generation polycarboxylic ether polymer developed for the premix and precast industries to maximise performance through a wide range of concrete strengths.

ADVA®690 contains no added chlorides and complies with AS 1478.1 – 2000 Type HWR. ADVA®690 contains no TEA.

Product Advantages

- High early strength achievement requiring reduced heat energy for curing
- High compression strengths at all ages
- Improved surface finish
- Reduced vibration for placement in reinforced concrete
- Easy addition during batching process
- Slump retention without retardation

Advantages

- ADVA® 690 has been developed specifically for concrete with a wide range of strengths eliminating the need for other superplasticisers for specific applications.
- ADVA® 690 produces very high slump concrete at low watercement ratios without segregation and loss of strength.
- It can be added at the batch plant during the batching process eliminating the need for on-site addition.
- It has superior slump retention without retardation.
- Reduction of steam or heat energy curing to achieve high early strengths.
- Requires less vibration for ease of placement in reinforced concrete.
- Improves surface finish and off form finishes.

Dispersion

Unlike conventional superplasticisers, which rely on electrostatic repulsion, ADVA®690 has been formulated on carboxylic ether polymers, which are comprised of lateral chains producing superior cement dispersion. Water is absorbed by the polymer, which then allows controlled cement hydration without rapid slump loss or retardation as with conventional naphthalene superplasticisers.

Application

ADVA®690 allows concrete to be produced over a wide range of strengths, at low water-cement ratios with high placement slumps. ADVA®690 can produce high flow concrete for tremie and pump mixes that require extended slump life. ADVA®690 is ideal for use in general precast and precast/prestressed applications to produce high early strengths with reduced heat energy required for curing.

Compatibility

It is not recommended that ADVA®690 be used with DAREX®AEA®unless in specific circumstances where trials are carried out prior to use. ADVA®690 is compatible with Portland cements including fly ash, blast furnace slag, silica fume and limestone blends. ADVA®690 can be used with V-MAR®3 to produce high quality, water-tolerant SCC type concretes. It is also compatible with most of the concrete admixtures from GCP Applied Technologies. However, admixtures containing melamine or naphthalene sulphonates should be avoided. All admixtures should be added to the mix separately and not premixed with other admixtures prior to addition. Please consult your local GCP representative for recommendations on compatible admixtures.

Addition Rates

Addition rates of ADVA®690 can vary depending on the application, however a typical dose range would be between 400 and 1,000mL / 100kgs total cementitious materials.

At a given water-cement ratio, the slump can be controlled by varying the addition rates. It is recommended that trials are conducted beforehand to determine the optimum dose range to suit your application. If further assistance is required please consult your local GCP representative.

Dispensing Equipment

Please contact your local GCP representative for further information regarding the dispensing equipment for this product.

Health and Safety

See ADVA®690 superplasticiser Material Safety Data Sheet or consult GCP Applied Technologies.

Packaging & Storage

ADVA®690 is available in bulk, IBC's, 205L drums and 20L pails. Shelf life is 12 months.

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gcpat.com.au/solutions/products/adva-690