ADVA® 142

New generation polymer-based superplasticiser for high early strength concrete

Product Description

ADVA®142 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®142 contains no added chlorides and complies with AS 1478.1 – 2000 Type HWR.

Product Advantages

- Superior slump retention with no retardation.
- High early strength achievement requiring minimal heat energy for curing.
- Improved surface finish.
- Reduced vibration for placement in reinforced concrete.
- Easy addition during batching process.

Advantages

- ADVA® 142 has been developed specifically for concrete with a wide range of strengths eliminating the need for other superplasticisers for specific applications.
- ADVA® 142 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.

ADVA®142 is an extremely versatile superplasticiser that has a wide range of applications with superior results.

Application

ADVA®142 allows concrete to be produced over a wide range of strengths, at low water-cement ratios with high placement slumps. ADVA®142 can produce high flow concrete for tremie and pump mixes that require extended slump life. ADVA®142 is ideal for use in general precast and precast/prestressed applications to produce high early strengths with minimal heat energy required for curing.

Dispensing Equipment

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

Health and Safety

See ADVA®142 Material Safety Data Sheet or consult GCP Applied Technologies.

Dispersion

Unlike conventional superplasticisers, which rely on electrostatic repulsion, ADVA®142 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.

Addition Rates

Addition rates of ADVA®142 can vary depending on the application, however a typical dose range would be between 400 and 1,200mL / 100kgs total cementitious materials.

For best results ADVA®142 should be added to the mix water during the batching process. 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.

Compatibility

It is not recommended that ADVA®142 be used with Darex®AEA®or Darex LS AEA unless in specific circumstances where trials are carried out prior to use. ADVA®142 is compatible with Portland cements including fly ash, blast furnace slag silica fume and limestone blends. It is also compatible with most 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.

Packaging & Storage

ADVA®142 is available in bulk and 20L pails. Shelf life is 12 months. ADVA®142 should be thoroughly agitated or stirred prior to its use.

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