ADVA® 555N

New generation PCE-based superplasticiser

Product Description

ADVA® 555N 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 555N contains no added chlorides and complies with AS 1478.1 – 2000 Type HWR. ADVA 555N contains no TEA.

Dispersion

Unlike conventional superplasticisers, which rely on electrostatic repulsion, ADVA 555N 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.

Product Advantages

- Superior slump retention with no retardation.
- 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.

Application

ADVA 555N allows concrete to be produced over a wide range of strengths, at low water-cement ratios with high placement slumps. ADVA 555N can produce high flow concrete for tremie and pump mixes that require extended slump life. ADVA 555N is ideal for use in general precast and precast/prestressed applications to produce high early strengths with reduced heat energy required for curing.

Advantages

- ADVA 555N has been developed specifically for concrete with a wide range of strengths eliminating the need for other superplasticisers for specific applications.
- ADVA 555N produces very high slump concrete at low water-cement 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.

Addition Rates

Addition rates of ADVA 555N 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.

Compatibility

It is not recommended that ADVA 555N be used with DAREX® AEA® or DAREX LS AEA unless in specific circumstances where trials are carried out prior to use. ADVA 555N is compatible with Portland cements including fly ash, blast furnace slag, silica fume and limestone blends. ADVA 555N can be used with V-MAR® 3 and CONCERA™ CP2100 to produce high quality, water-tolerant self-consolidating type concretes. 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 555N is available in bulk, IBC's, 205L drums and 20L pails. Shelf life is 12 months.

Dispensing Equipment

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

Health and Safety

See ADVA 555N Safety Data Sheet or consult GCP Applied Technologies.

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gcpat.com.au/solutions/products/adva-high-range-water-reducers/adva-555n