TYTRO® WR 172

New generation high range water-reducing superplasticising admixture for shotcrete

Product Description

TYTRO®WR 172 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 shotcrete to maximise performance through a wide range of shotcrete strengths.

TYTRO®WR 172 contains no added chlorides and complies with AS 1478.1 – 2000 Type HWR. TYTRO®WR 172 contains no TEA.

Product Advantages

- TYTRO® WR 172 has been developed specifically for shotcrete with a wide range of strengths eliminating the need for other superplasticisers for specific applications.
- It produces very high slump shotcrete 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.
- TYTRO® WR 172 is an extremely versatile superplasticiser that has a wide range of applications with superior results.

Application

TYTRO®WR 172 allows shotcrete to be produced over a wide range of strengths, at low water-cement ratios with high placement slumps. TYTRO®WR 172 can produce high flow shotcrete for tremie and pump mixes that require extended slump life. TYTRO®WR 172 is ideal for use in wet mix shotcrete applications to produce high early strengths with reduced heat energy required for curing.

Addition Rates

Addition rates of TYTRO®WR 172 can vary depending on the application. However, a typical dose range would be between 400 and 1,200mL / 100kgs total cementitious materials. Higher dose rates can be considered for advanced performance.

For best results TYTRO®WR 172 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 GCP's recommendation 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

TYTRO®WR 172 is compatible with Portland cements including fly ash, blast furnace slag silica fume and limestone blends. TYTRO®WR 172 can be used with TYTRO®RM 475 to produce high quality, water-tolerant shotcretes. It is also compatible with the TYTRO®range of shotcrete admixtures. 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

Dispersion

Unlike conventional superplasticisers, which rely on electrostatic repulsion, TYTRO®WR 172 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.

TYTRO®WR 172 is available in 1,000L totes and 205L drums. 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 TYTRO®WR 172 superplasticiser Material Safety Data Sheet or consult GCP Applied Technologies.

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Last Updated: 2022-11-24
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