

TYTRO[®] RC 430

Rheology Controlling and Strength Enhancing Admixture ASTM C494 Type S

Product Description

TYTRO[®] RC430 is a non-corrosive, non-chloride rheology controlling admixture for concrete and shotcrete that accelerates cement hydration, resulting in increased early compressive and flexural strengths. Featuring the latest in nanotechnology, TYTRO[®] RC430 contains a liquid dispersion of discrete, spherical, uniformly distributed nanometric particles of amorphous silica for use in concrete.

Manufactured to the highest possible standards, TYTRO[®] RC430 is formulated to comply with the Standard Specification for Chemical Admixtures for Concrete, ASTM C494 Type S Specific Performance. TYTRO[®] RC430 is supplied as a ready to use liquid that weighs approximately 10.1 lbs/gal (1.21 kg/L)

Uses

TYTRO[®] RC430 is typically used in concrete applications to increase and provide faster early age compressive and flexural strengths. TYTRO[®] RC430 is used in shotcrete applications to improve sprayability and pumpability by increasing cohesion, reducing rebound, providing superior bond to rock substrate, and to provide faster early strength development.

Advantages

Concrete

- Excellent early and later age strengths
- Permeability reduction
- Improved durability
- Outstanding rheology properties

Shotcrete

- Enhanced sprayability
- Lower rebound and dust
- Reduced cycle time (larger layer thickness)
- Excellent strength and durability

Addition Rates

For concrete applications, TYTRO[®] RC430 addition rates can vary from 2–10 fl oz/100 lbs (130–650 mL/100 kg), with a typical range of 3–6 fl oz/100 lbs (200–400 mL/100 kg) of cementitious materials. For shotcrete applications, dosage rates will vary depending on application, mix design and aggregate gradation, but will typically range from 0.5% to 1.5% by weight of total cementitious. Addition rates may vary depending on materials, job conditions and desired performance characteristics. Please consult your GCP Applied Technologies representative for information and assistance.

Compatibility with Other Admixtures and Batch Sequencing

TYTRO[®] RC430 is compatible with most GCP admixtures as long as they are added separately to the concrete mix, usually through the water holding tank discharge line. In general, it is recommended that the product be added to the concrete mix near the end of the batch sequence for optimum performance. Please see GCP Technical Bulletin TB-0110, Admixture Dispenser Discharge Line Location and Sequencing for Concrete Batching Operations for further recommendations. For optimum performance, TYTRO[®] RC430 should not come in contact with any other admixture before or during the batching process. Different sequencing may be used if local testing shows better performance.

Pretesting of the concrete mix should be performed before use, and as conditions and materials change in order to assure compatibility, and to optimize dosage rates, addition times in the batch sequencing and concrete performance. For concrete that requires air entrainment, the use of an ASTM C260 air-entraining agent (such as DARAVAIR[®] or DAREX[®] product lines) is recommended to provide suitable air void parameters for freeze-thaw resistance. Please consult your GCP Applied Technologies representative for guidance.

Packaging & Handling

TYTRO[®] RC430 is available in bulk, delivered by metered tank trucks, in 275 gal (1040 L) totes, and in 55 gal (208 L) drums. TYTRO[®] RC430 should be stored where temperatures remain above 35° F (2° C). Freezing temperatures cause irreversible precipitation of the silica. Continuous exposure to high temperatures will shorten the shelf life of TYTRO[®] RC430. Avoid storing TYTRO[®] RC430 in areas where the temperature routinely goes above 110° F (43° C).

Dispensing Equipment

A complete line of accurate, automatic dispensing equipment is available.

Health and Safety

Avoid eye and skin contact and wear rubber gloves and goggles. If contact occurs, rinse with plenty of water. In case of eye contact seek medical advice. For further information refer to the Safety Data Sheet (SDS) or contact your local GCP Applied Technologies representative.

gcpat.com | North America customer service: 1-877-423-6491

We hope the information here will be helpful. It is based on data and knowledge considered to be true and accurate, and is offered for consideration, investigation and verification by the user, but we do not warrant the results to be obtained. Please read all statements, recommendations, and suggestions in conjunction with our conditions of sale, which apply to all goods supplied by us. No statement, recommendation, or suggestion is intended for any use that would infringe any patent, copyright, or other third party right.

TYTRO is a trademark, which may be registered in the United States and/or other countries, of GCP Applied Technologies Inc. This trademark list has been compiled using available published information as of the publication date and may not accurately reflect current trademark ownership or status.

© Copyright 2023 GCP Applied Technologies Inc. All rights reserved.

GCP Applied Technologies Inc., 2325 Lakeview Parkway, Suite 475, Alpharetta, GA 30009, USA

GCP Canada, Inc., 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6.

This document is only current as of the last updated date stated below and is valid only for use in the Canada. It is important that you always refer to the currently available information at the URL below to provide the most current product information at the time of use. Additional literature such as Contractor Manuals, Technical Bulletins, Detail Drawings and detailing recommendations and other relevant documents are also available on www.gcpat.com. Information found on other websites must not be relied upon, as they may not be up-to-date or applicable to the conditions in your location and we do not accept any responsibility for their content. If there are any conflicts or if you need more information, please contact GCP Customer Service.

Last Updated: 2024-06-21

ca.gcpat.com/solutions/products/tytro-shotcrete-system/tytro-rc-430