

TYTRO[®] AE 225

Air Entraining Admixture for Shotcrete

Product Description

TYTRO[®]AE 225 is specially formulated for use as an air-entraining admixture for shotcrete and is manufactured under rigid control which provides uniform, predictable performance. It is supplied ready-to-use and does not require premixing with water.

Air Entraining Action

Air is entrained by the development of a semimicroscopic bubble system introduced into the mix by agitation and stabilised by TYTRO[®]AE 225.

Workability is Improved

Millions of tiny air bubbles entrained with TYTRO[®]AE 225 act as flexible ball bearings, lubricating and plasticising the shotcrete mix. This permits a reduction in mixing water with no loss in slump. Placeability is improved, and bleeding and segregation are minimised

Durability is Increased

TYTRO[®]AE 225 shotcrete is extremely durable, particularly when subjected to freezing and thawing. It has resistance to frost and deicing salts, as well as to sulfate, sea and alkaline waters.

Compatibility with Other Admixtures

TYTRO[®]AE 225 is compatible in shotcrete with GCP TYTRO[®]accelerating admixtures, water-reducing admixtures and water reducing retarders. By combining the separate effects of air entrainment with the dispersion of a water-reducing admixture, the water requirement of shotcrete may be reduced with proportional increases in strength and improvement in durability. Each admixture should be added separately to the mix.

Addition Rates

There is no standard addition rate for TYTRO[®]AE 225. The amount to be used will depend upon the amount of air required under job conditions, usually in the range of 3 to 6%. Typical factors which might influence the amount of air entrained are: temperature, cement, sand gradation, and use of extra fine materials such as fly ash. Typical TYTRO[®]AE 225 addition rates range from 20 to 100 ml/m³ of cementitious material. Higher addition rates can be used for various projects. Addition rates as high as 300 to 500 ml/m³ of cementitious material can be considered.

The air-entraining efficiency of TYTRO[®]AE 225 becomes even greater when used with water-reducing and set-retarding agents. This may allow a reduction of up to two-thirds in the amount of TYTRO[®]AE 225 required for the specified air content. It is GCP's recommendation that trials are conducted to determine the optimum addition range for your application. Shotcrete Admixtures

Health and Safety

For further information we recommend that you consult the SDS (Safety Data Sheet) or contact GCP Applied Technologies

Technical Data

PROPERTY	VALUE
Form	Liquid
Color	Colorless
Density	1,01 ± 0,02 g/cm ³
pH	8,0 ± 1,0
Water-soluble chloride content	< 0,10 M.-%
Alkali content	< 1,5 M.-%
Storage	Keep well closed in original containers. Protect from excessive heat and frost. Frozen products can be re-used after thawing and following intensive stirring
Shelf-life	approx. 1 year in closed original containers

gcpat.ae | United Arab Emirates customer service: +971 4 5139560

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 trademarks, 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 2018 GCP Applied Technologies Inc. All rights reserved.

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

P. O. Box 5006, Office 2104, 21 Floor, The Exchange Tower, Opp. JW Marriott Marquis Hotel, Business Bay, Dubai – United Arab Emirates

This document is only current as of the last updated date stated below and is valid only for use in the UAE. 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.ae. 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: 2025-05-15

gcpat.ae/solutions/products/tytro-ae-225