

TYTRO[®] SA 520

Alkali-free, liquid, high-performance set accelerator for shotcrete

Product Description

TYTRO[®] SA 520 is a high-performance, alkali-free set accelerator specifically formulated to provide high early strength at low dosage rates, and improve productivity by shortening the time of setting without compromising long-term strength and durability.

Uses

TYTRO SA 520 is used in all shotcrete applications where high early strength is required, and especially in the following applications:

- Temporary and permanent rock support in tunnels
- Underground rock support in mining
- Slope stabilisation

Product Advantages

- Efficient dosage rate – highly active formulation for lowest dosages
- Reduced excavation downtime – increased adhesion and faster setting
- Improved strength – increased early age strength development without compromising later age strength
- Reduced cycle times – quicker setting action and increased layer thickness for overhead work
- Minimum material waste – lower rebound and dust
- Safer and healthier to handle – non-alkaline formulation
- Robust and easy to formulate – liquid product, easily measured and dosed

Addition Rates

The dosage of TYTRO SA 520 can vary based on the type of application, mix design, cement type and content, W/C, temperature of the concrete, ambient temperature and temperature of the substrate on which the concrete is to be applied.

The dosage of TYTRO SA 520 normally ranges between 4% and 8% by the total weight of cementitious materials. Overdosing (>10%) may result in decreased final strength. Should conditions require using more than the recommended addition rates, please consult your local GCP representative.

GCP recommends that trials be performed before use to assess and optimise dosage rates and shotcrete performance. Predetermined and tested re-entry requirements are to be measured and nominated. If further assistance is required please consult your local GCP representative.

Properties

Form	Liquid
Colour	Clear
Density (g / cm ³)	1.15 - 1.35
pH (25°C)	3 +/- 1
Chloride content	<0.1%
Thermal stability	5 °C to 35 °C

Packaging

TYTRO SA 520 is available in 205L polyethylene drums and 1,000L totes. TYTRO SA 520 is also available in bulk, delivered by metred tank trucks on request.

Storage

Temperature

TYTRO SA 520 should be stored at a temperature range of 5°C to 35°C. It is recommended that TYTRO SA 520 be kept out of direct sunlight.

Compatibility

TYTRO SA 520 is compatible with all TYTRO® shotcrete admixtures. GCP recommends that a suitable superplasticiser and slump life controlling admixture be incorporated into the shotcrete mix to achieve extended working life and maintain low water-to-cementitious materials ratio. TYTRO® WR high range water-reducing and TYTRO® HC hydration control admixtures are recommended for this purpose.

Pretesting of the shotcrete mix should be performed before use and as conditions and materials change in order to ensure compatibility with other admixtures.

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