

# TYTRO<sup>®</sup> SA 530

## Alkali-Free Accelerator for Sprayed Concrete

### Description

TYTRO SA 530 is a high performance, alkali-free accelerating admixture for sprayed concrete operations. Typically used in wet mix sprayed concrete operations, it is an easy flow liquid suspension admixture. It is recommended for all sprayed concrete applications requiring high early strength without affecting the final strength of the in-place sprayed concrete. It is non-alkaline and environmentally neutral. TYTRO SA 530 is a ready-to-use liquid added to wet sprayed concrete at the spray nozzle. One litre of TYTRO SA 530 weighs approximately 1.46 to 1.48 kg.

### Applications

TYTRO SA 530 is used in all types of sprayed concrete requiring high early strength properties. Examples include temporary or permanent tunnel linings, strata support in mining and slope stabilisation.

TYTRO SA 530 is ideal for use in applications requiring quick set properties and early age strength developments. With variable dose rates, the product formulation allows improved progress with heading advancements in overhead applications with capability to have high build up sections in difficult ground conditions, or in wet areas.

### Advantages

TYTRO SA 530 is alkali-free and environmentally safe. It will provide optimal bond, high strengths and low rebound during spray operations with water-cement ratios below 0.5 (including moisture in the aggregates). It provides fast setting and high early strengths without significant losses in final (28-day) strengths.

### Dose Rate Levels

Typical dose rate levels of 3% to maximum 10% by weight of cement (BWC) typically 5% - 6% will result in high early strength in standard mixtures and good bonding. Dose rates can be varied to desired setting and strength development requirements. We recommend dosage of AF Accelerators sparingly as overdose can influence final strengths.



Dosage rate for TYTRO SA 530 depends on cement type, cement content, water-cement ratio, temperature of the concrete, ambient temperature and temperature of the substrate on which the concrete is to be applied. It is always recommended to conduct pre-construction trials to adapt the dosage rates to the properties of the material used and job conditions.

### Admixture Compatibility

TYTRO SA 530 is compatible with Grace concrete admixtures and some other types of concrete admixtures and reinforcements. In spraying operations it is recommended that a suitable superplasticiser and slump life controlling admixture be incorporated into the concrete mix to achieve extended working life and low water-cement ratio of the mix. TYTRO WR Superplasticisers and TYTRO HC admixtures are recommended for this purpose. Please refer to your Grace representative for advice.

Typical Properties	
Appearance	Amber/Yellow Liquid
pH	Approx. 3
Viscosity	250mPa.s (20°C)
Chloride Content	Nil
Air Entrainment	n/a
Freezing Point	0°C
S.G.	1.46

TYTRO SA 530 is packaged in 1,250 kg totes. Product must be stored in suitable polypropylene, polyethylene, or PVC containers. Standard steel must not be used. TYTRO SA 530 may be stored for at least 3 months in original, unopened containers at temperatures between +5°C and 32°C.

Storing and handling requires cleanliness since impurities may effect stability of product.

When product is stored for periods, or left idle on spray rigs continuously, the product should be vigorously recirculated in the tanks by means of stirring apparatus or through recirculation before each use.

It is recommended to pump concrete up to the spraying nozzle in the so-called dense stream and then add the accelerator into the pressurised air stream shortly before it is pressed into the concrete stream (e.g. ring-hole-nozzle). This distance between the stream converter and the spraying nozzle should be a maximum of a few centimetres.

## Health and Safety

TYTRO SA 530 is slightly acidic. When handling the product, we recommend taking the same safety precautions as for materials containing cement. Please refer to TYTRO SA 530 Material Safety Data Sheet or consult Grace Construction Products.

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