

## **RockStab HCA 10 (Accelerating Admixture)**

### Technical Datasheet

#### **1. Description**

RockStab HCA 10 is high quality, liquid, non-chloride chemical admixtures which controls the dynamics of cement hydration.

#### **2. Product Information**

Packaging:	20 Liters 210 Liters 1000 Liters Bulk
Shelf Life	12 Months from production date if stored properly
Storage Temperature:	Minimum +1°C Maximum +60°C
Colour/Appearances	Clear Liquid
Density:	1.080 – 1.110
pH Value:	1.0 – 2.0
Chloride Content:	<0.1%

#### **3. Technical Information**

##### Concreting Guidance

##### **Wet-mix sprayed concrete:**

Premix aggregates with cement and one half of the mixing water. Under continuous mixing, add RockStab HCA 10 and high-performance superplasticizer, premixed with the second half of the mixing water, or after all the water has been added. Normal mixing time is sufficient. To avoid slump loss, the recommended minimum water content is 200l/m<sup>3</sup>. In the event of unexpected delays, a later addition of 0.2 – 1% of RockStab HCA 10 is possible to prolong storage for a few hours.

##### **Dry-mix sprayed concrete:**

Premix aggregates with cement. The water content should be between 3% and 6%. Slowly add manually or with a dosing device the necessary quantity of RockStab HCA 10 under constant mixing material (e.g. by spraying), mixing time can be reduced.

The addition of RockStab HCA 10 to the fresh mix is ideal. However, it can be added up to 30 minutes after mixing of the dry-mix material without any problems.

#### Concrete Mix Design

#### **TYPICAL WET MIX DESIGN FOR AN OPEN TIME OF 4 TO 6 HOURS**

Ordinary Portland Cement = 400Kg/m<sup>3</sup>

Microsilica = 30Kg/m<sup>3</sup>

Aggregate 0-8mm = 1710Kg/m<sup>3</sup>

RockStab HCA 10 = 0.5 -2.0 Kg

Superplasticizer = 2.4 – 6.0 Kg

Water / Binder ratio = 0.45

### **4. Application Information**

#### Recommended Dosage

The dosage ranges from 0.6% bwc for approx. 3 Hours of maintained workability.

The dosage can be increased up to 2% bwc for approx. 72 Hours of maintained workability.

Dosage indicated in this data sheet is only to be used as a guideline. To obtain accurate dosage rates, field tests have to be done with cement and aggregates under local conditions. It is recommended that you consult your local RSS Mining technical representative.

Normal recommended dosage of RockStab HCA 10 varies between 0.2% - 1% by weight of cement. The required dosage depends on:

- Type of cement use
- w/c ratio
- Ambient and concrete temperature
- Targeted open time

### **5. Directions of Use**

- Tunnelling and mining
- Temporary and permanent support
- Slope stabilization
- Annulus grouting (TBM)
- Cementitious injection systems

### **6. Characteristics / Advantages**

- Fully flexible delivery options for sprayed concrete mixes
- No cleaning of pumps or pipes during work interruptions
- Complete use of wet and dry mixes – no waste disposal
- Time and cost saving

- In addition to these benefits related to its functions as a hydration control system, it also provides considerable reduction of rebound and dust.

## 7. Basis of product Data

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

## 8. Ecology, Health and Safety

RockStab HCA 10 is an irritant fluid. Contact with skin and eyes must be avoided. It is essential that safety glasses and rubber gloves are worn during handling. In case of contact with eyes or skin, flush immediately with plenty of water and seek medical advice.

For further information, see the Material Safety Data Sheet.

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for exact description of the application fields.

## 9. Legal Notes

This information, and, in particular, the recommendations relating to the application and end-user of RSS Mining products, are given in good faith based on RSS Mining current knowledge and experiences of the products when properly stored, handled and applied under normal conditions in accordance with RSS Mining recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of this product must test the product's suitability for the intended application and purpose. RSS Mining reserves the right to change the properties of its product. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms and sale and delivery. Users must always refer to the most recent issue of the local product data sheet for the product concerned copies of which will be supplied on request.