

MEYCO[®] SA540

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Alkali-free, non caustic and non toxic high performance powder accelerator for dry-mix shotcrete

Product description

MEYCO[®] SA540 is a high performance alkali-free, non caustic and non toxic accelerator for use in the dry-mix sprayed concrete process. It is a powder additive whose dosage can be varied to the desired setting and hardening times

Fields of application

MEYCO[®] SA540 is suitable for all applications where high early strength, high final strength and large layer thickness are required

- For temporary and permanent rock support
- For final lining
- For repair works
- In tunnels
- In mining

Features and benefits

The quick settings properties allow

- overhead layer thickness of 10-15 cm in a single application (as with aluminate based accelerators)
- rapid work process

The unique formula provides

- good early strength development
- limits the decrease of final strength
- improves durability as compared to mixes with traditional accelerators

The non caustic and non toxic nature of the product

- prevents skin burns and provides an improved working environment
- reduces required handling precautions and hence improves economy
- reduces salt content in leaching water

Packaging

MEYCO[®] SA540 is supplied in 15 kg bags

Technical data

Form	powder
Color	white
Bulk density	750-1000 kg/m ³
pH value (in water dispersion)	7 ±0.5
Chloride content [Na ₂ O] EQV. (%bw)	<0.1%
	<1%

Application procedure

Preparation of substrate

The substrate must be clean and free from loose particles and only wet to lightly sprinkled

Sensitivity to cement

Age: It is recommended to only use fresh cement since the age of the cement can have a negative influence on the setting characteristics of the mix

Type: MEYCO[®] SA540 is sensitive to the type of cement. With some cements the obtained setting characteristics can be slow. This sensitivity can be compensated by lowering the w/c ratio.

We recommend using Portland cements (OPC/RHPC) which normally give faster setting characteristics than blended or sulphate resistant cement types.

In any case, it is strongly recommended to do preliminary tests to check the setting and the 24 hour strength characteristics of the cement type/types used in the project

Evaluation of setting and 24 hour strength characteristics:

Initial set	Final set	24 h strength	Rating
2 min.	6-8 min.	18-20 MPa	good
5 min.	8-12 min.	12-15 MPa	OK
>10 min	>15 min.	<10 MPa	poor

Remark: If the setting times are poor, the 24 h strength usually remains good. With a slow setting it is still possible to apply 5-7 cm on the wall and 3-5 cm overhead

Mixing

The minimum cement content with the use of MEYCO® SA540 is 350 kg per m³

MEYCO® SA540 is normally added to the mix immediately prior to use

Capability

With combination of MEYCO® SA540 and Delvo®crete Stabilizer do not dose more than

- 0.4% by weight of binder of the Delvo®crete Stabilizer at ambient temperatures of >+20° C
- at ambient temperatures of >+15° C only 0.2% by weight of binder should be used.
- below +15° C Delvo®crete Stabilizer should not be used at all

Consumption

With very slow reacting cements types there could also be problems with adhesion to the rock
Consumption

The dosage of MEYCO® SA540 depends on the temperature of the concrete, air and substrate. Another important factor influencing the dosage is the reactivity of the used cement.

Depending on required setting time and early strength requirements, the consumption of

MEYCO® SA540 normally ranges between 5-10 % of the binder weight. Overdosing (>10%) may result in decreased final strength

Storage

If stored dry and in tightly closed original bags, MEYCO® SA540 has a shelf life of 6 months. If subject to humidity, the product loses its effectiveness. Possible lumps should be chorused by hand. Material which is too hard must be eliminated

Safety precautions

Unlike traditional sprayed concrete accelerators, MEYCO® SA540 does not harm skin. The risk for any health hazards is therefore reduced – to the benefit of the applicator. MEYCO® SA540 contains no hazardous substances requiring labeling. However, the same precautions as with handling and use of cementitious products should be observed:

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 Material Safety Data Sheet or contact your local BASF Company.

The information given here is true, represents our best knowledge and is based not only on laboratory work but also on field experience. However, because of numerous factors affecting results, we offer this information without guarantee and no patent liability is assumed. For additional information or questions, please contact your local UGC representative.

Headquarter:

BASF Construction Chemicals Europe Ltd
MEYCO Global Underground Construction
Vulkanstrasse 110
8048 Zurich, Switzerland
Phone +41-58-958 22 11
Fax +41-58-958 32 46

For more information: Visit us: www.meyco.basf.com

Contact us: meyco.ugc@basf.com