

MEYCO® SA 545

V1 21/04/04

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

Product description

MEYCO® SA 545 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® SA 545 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® SA 545 is supplied in 25 kg bags

Technical data

| | |
|-------------------------|------------------------------|
| Form | powder |
| Colour | white |
| Bulk density | 1030 -1100 kg/m ³ |
| pH value (EN ISO 787-9) | 4 ± 1 |
| Chloride content | <0.1% |

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® SA 545 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® SA 545 is 350 kg per m³.

MEYCO® SA 545 is normally added to the mix immediately prior to use.

Capability

With combination of MEYCO® SA 545 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

The dosage of MEYCO® SA 545 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® SA 545 normally ranges between 4 and

8% of the binder weight. Overdosing (>10%) may result in decreased final strength

Storage

If stored dry and in tightly closed original bags, MEYCO® SA 545 has a shelf life of 12 months. If subject to humidity, the product loses its effectiveness. Possible lumps may be simply crushed by hand. Material which is too hard must be discarded.

Safety precautions

Unlike traditional sprayed concrete accelerators, MEYCO® SA 545 does not harm skin. The risk for any health hazards is therefore reduced to the benefit of the applicator.

MEYCO® SA 545 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 Degussa 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.

Headquarters:

UGC International
Division of MBT (Switzerland) Ltd
Vulkanstrasse 110
8048 Zurich, Switzerland
Phone +41-1-438 22 10
Fax +41-1-438 22 46

Europe:

Degussa Construction Chemicals (Europe) AG
Vulkanstrasse 110
8048 Zurich, Switzerland
Phone +41-1-438 22 10
Fax +41-1-438 22 46

Region Americas:

Master Builders, Inc
Underground Construction Division
23700 Chagrin Boulevard
Cleveland, OH 44122-5554
USA
Phone +1-216-839 75 00
Fax +1-216-839 85 12

Machines/Equipment:

MEYCO Equipment
Division of MBT (Switzerland) Ltd
Hegmattenstrasse 24
8404 Winterthur
Switzerland
Phone +41-52-244 07 00
Fax +41-52-244 07 07

Latin America:

Degussa Construction Chemicals Latin America
23700 Chagrin Boulevard
Cleveland, OH 44122-5554
USA
Phone +1-216-839 75 00
Fax +1-216-839 88 26

Asia Pacific:

Degussa Construction Chemicals Asia Pacific
Room 2301, Shanghai Times Square
93 Huai Hai Zhong Road
Shanghai 200021, P.R. China
Phone +86 – 21-6437 4889
Fax +86 – 21-5306 9055

Visit us at <http://www.degussa-ugc.com>

