



The Chemical Company

MEYCO[®] SA160

Alkali-free, liquid high performance set accelerator for sprayed concrete

DESCRIPTION

MEYCO SA160 is a high performance alkali-free set accelerator for sprayed concrete. It is a liquid admixture whose dosage can be varied to the desired setting and hardening times.

FIELDS OF APPLICATION

MEYCO SA160 is suitable for all applications where high early strength, good final strength and thick layers are required.

- Temporary and permanent rock support in tunnels
- Rock support in mining
- In poor ground conditions
- Slope stabilisation

FEATURES AND BENEFITS

MEYCO SA160 is ideally suited for wet mix sprayed concrete for rock support, because:

- The quick setting property allows:
Rapid work progress and the ability to construct thick sprayed concrete linings via layered application during one construction sequence.
- The unique product formulation provides continual early-age strength development whilst also achieving excellent long-term strength and durability.
- **MEYCO SA160** is a liquid product and thus provides easy handling, as well as facilitating accurate addition to the concrete.
- Very low dust production and therefore a good working environment.
- Since the product is non-aggressive, it provides improved working safety, reduced environmental impact and lower handling costs.

TECHNICAL PERFORMANCE DATA

| | |
|-------------------------------|------------------|
| Form | Suspension |
| Colour | Beige |
| Density (+20°C, Gamma-Ball) | 1.43 ± 0.06 g/ml |
| pH-value (1:1 water solution) | 2.6 ± 0.5 |
| Viscosity (+20°C, Brookfield) | 650 ± 350 mPa s |
| Thermal stability | +5°C to +30°C |
| Chloride content | <0.1% |

PACKAGING

MEYCO SA160 is supplied in 210 litre drums, 1000 litre containers and in bulk.

APPLICATION

The substrate should be clean and free from loose particles and preferably damp.

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

MEYCO SA160 can be sensitive to the type of cement. With some cements the setting characteristics can be too slow. We recommend the use of Portland cements (PC/HPC) which normally give faster setting than blended or sulphate resistant cement types. However, **MEYCO SA160** also works well with composite cement types (blended cements, fly-ash/slag). In all cases, it is strongly recommended to do preliminary tests to check the setting and the 24 h strength of the cements planned for use in a project.

Evaluation of setting and 24 h strength (without addition of slump killing system), should be carried out on a test mortar in accordance with EFNARC European Specification for Sprayed Concrete (1996), Appendix 1, Clause 6.3. The following results should be taken as a performance guide only:

| Initial | 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.

MIXING

When **MEYCO SA160** is used for wet mix spraying, the w/c+b ratio should be below 0.5 and preferably <0.45. When targeting extremely high early strength, 0.40 or lower. The lower w/c+b ratios provide faster setting, higher early strength, better durability, lower accelerator dosage and thicker layers can be applied over head.

DOSAGE

MEYCO[®] SA160 is added in the nozzle. To ensure a constant and accurate dosage to ensure quality sprayed concrete, it is crucial to follow the pump selection guideline given below:

Works very well with:

- mono pumps (screw pumps)
- squeeze pumps (Bredel)
- MEYCO Dosa

Should not to be used with:

- piston pumps
- all pumps with ball- and seat valves
- pressure tanks
- gear pumps

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MEYCO[®] SA160

Do not use a filter on the suction hose as this causes obstructions. Preferably the material should be drawn off the bottom of the drum/container.

COMPIBILITY WITH OTHER ACCELERATORS

MEYCO SA160 can be interchanged with MBT's alkali-free accelerators MEYCO SA161, 162 and 170. However storage of mixed MEYCO SA accelerators is not recommended. MBT's alkali-free accelerators shall not be mixed with any other type of MBT accelerator other than those listed above.

Do not mix MEYCO SA160 with any type of accelerator produced by another manufacturer, as this could cause immediate clogging of dosing pumps and hoses.

CONSUMPTION

The dosage of MEYCO SA160 depends on the temperature conditions, reactivity of cement used and on required thickness of layers, setting time and early strength development. The consumption of MEYCO SA160 is normally in the range of 3 to 10% of binder weight.

Overdosing (>10%) may result in decreased final strength.

CLEANING OF DOSING PUMP

Prior to the use of MEYCO SA160, the dosing pump and other parts of the system must be thoroughly cleaned with plenty of water.

Failure to do so provokes blockages in the dosing system. Make sure that all operators involved in testing and application are fully informed.

STORAGE

MEYCO SA160 must be stored at minimum +5°C and maximum +30°C. MEYCO SA160 has to be kept in closed containers made of plastic, glass fibre plastic and stainless steel. MEYCO SA160 must not be stored in normal steel containers as the pH can cause corrosion that might affect the performance of the product.

After prolonged storage we recommend that MEYCO SA160 be always fully agitated prior to use by mechanical stirring or re-circulation pumping. Agitation by compressed air is strictly not advised.

If stored in tightly closed original containers under the above given conditions, MEYCO SA160 has a shelf life of 3 months.

Open containers will allow prolonged contact with air leading to a skin film and lumps being produced that may cause blocking of accelerator system.

It is recommended that your local MBT representative be consulted prior to the use of any product that has been frozen.

Performance testing should always be carried out before use.

PRECAUTIONS

MEYCO SA160 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 MBT company.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this **BASF Construction Chemicals** publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

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