

**Lubricating aid, VMA and strength enhancer for concrete****CAA Admixtures Categories  
for "Special Purposes"****Description of Product**

MEYCO<sup>®</sup> MS 685 is a liquid admixture based on a suspension of amorphous silica.

These ultra fine particles start working as soon as they are incorporated in the mix. The texture of the slurry is similar to cement paste and creates a stable microscopic mineral.

This texture provides improved cohesion, lessens porosity and increases "compactness" of the mix.

**Fields of Application**

- Pump Concrete / Semi Dry Mixes
- Mixes exposed to high friction
- Concrete exposed to frequent wetting
- Concrete with fine Architectural finish
- High Performance concretes
- Shotcrete concrete
- Injection mortars
- Self-compacting concrete
- Improved Flexural Strength

**Features and Benefits**

The amorphous silica starts working in a pozzolanic manner as soon as it is incorporated in the cement based mix and as a consequence gives texture to the paste.

This enhanced texture improves the whole rheology of the concrete mix (or mortar) and prevents migration of the water, therefore:

- Improves Cohesion
- Reduces pump pressures
- Reduces the tendency for a mix to segregate
- Reduces porosity
- Improves the overall quality of the concrete
- Corrects a lack of fine elements within a grading curve.
- Improves surface finish

**Technical Data/Typical Properties**

Appearance	Opalescent, no smell or taste
Specific gravity @ 20°C	1.3 g/cm <sup>3</sup>
Viscosity (cPS)	< 15
Solid Content (wt%)	40
pH-value	9.4

**Dosage**

MEYCO<sup>®</sup> MS 685 should be used at a dosage of between:

*By Volume* - 0.25 to 2.0 litres per 100 kg of cement (binder)

*By Mass* - 0.325 to 2.6 kg per 100 kg of cement (binder)

The dosage will vary according to the quantity of fines within a mix and the resultant rheology

required for the application. Preliminary tests will help to find the optimum dosage.

**Packaging**

MEYCO<sup>®</sup> MS 685 is available in 1000-litre IBC's, 205-litre drums and 25-litre containers.

**Recommendations**

MEYCO<sup>®</sup> MS 685 should be incorporated in the mixing water or added to the mix after the water has been dispersed. It should not be added to the dry materials.

**Applications****Viscosity Modifier**

Due to its ultra fine particle size MEYCO<sup>®</sup> MS 685 "completes" the grading curve within high flow and Self Compacting Concretes. This greatly improves the support within high flow mixes and prevents segregation and bleeding. The inclusion of MEYCO<sup>®</sup> MS 685 also improves the surface finish.

**Strength Enhancer**

By optimising the mix and incorporating MEYCO<sup>®</sup> MS 685 along with a PCE based water reducer both the compressive and flexural strength can be improved. Normally a concrete achieves a flexural strength that is 1/10<sup>th</sup> of its compressive strength whilst the optimised mix can achieve an improved ratio.

**Lubricating Aid**

By the inclusion of MEYCO<sup>®</sup> MS 685 in "extruded or slip-formed" precast concretes the surface friction is greatly reduced. Both the Force required to "initiate" travel and the Force required to travel along the casting bed are typically reduced by 30%. This greater efficiency along with a reduction in the cement content, as the air-entrainer previously incorporated for lubrication is removed, shows significant reduction in the cost of extruded/slip-formed Precast units.

**Storage**

MEYCO<sup>®</sup> MS 685 should be stored in a place where temperature does not drop below +5°C. If product has frozen, thaw at +3°C and agitate until completely reconstituted. Store under cover, out of direct sunlight and protect from extremes of temperature. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice, consult BASF Construction Chemicals Technical Services Department.

**Shelf Life**

Up to 18 months if stored in accordance to manufacturer's instruction in unopened containers.

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**Health and Safety**

\*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

**Spillage**

Chemical products can cause damage; clean spillage immediately.

**DISCLAIMER**

"BASF plc, Construction Chemicals " (the Company) endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use.

Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application.

Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.