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MasterRoc[®] MS 685 (Formerly known as Meyco[®] MS 685)

Lubricating Aid, VMA and Strength Enhancer for Concrete

DESCRIPTION OF PRODUCT

MasterRoc[®] 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

DOSAGE

MasterRoc[®] MS 685 should be used at a dosage of between:

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

TECHNICAL DATA

Appearance	Opalescent, No Smell or Taste
Specific Gravity @ 20°C	1.13 g/cm ³
Viscosity (cPS)	< 15
Solid Content (wt%)	40
pH-value	9,4



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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

MasterRoc® MS 685 is available in standard 1100 kg IBC containers or in bulk.

RECOMMENDATIONS

MasterRoc® 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.

APPLICATION PROCEDURE

Viscosity Modifier

Due to its ultra fine particle size **MasterRoc® 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 **MasterRoc® MS 685** also improves the surface finish.

Strength Enhancer

By optimising the mix and incorporating **MasterRoc® 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 1/10th of its compressive strength whilst the optimised mix can achieve an improved ratio.

Lubricating Aid

By the inclusion of **MasterRoc® 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

MasterRoc® 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.

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



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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.

DISCLAIMER

The technical information given in this publication is based on the present state of our best scientific and practical knowledge. **BASF Türk Kimya Sanayi ve Tic. Ltd. Şti.** is only responsible for the quality of the product. **BASF Türk Kimya Sanayi ve Tic. Ltd. Şti.** is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones.

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