

# MasterRoc MF 705

High performance backfill admixture

## Material Description

**MasterRoc MF 705** is a ready-to-use, non-chloride liquid admixture used for making more uniform and predictable high-performance backfill. **MasterRoc MF 705** admixture retards or stabilises setting time by controlling the hydration of Portland cement and other cementitious materials to facilitate pumping and placing operations. It can be used to stabilise cement slurries for cemented rock fills, cemented hydraulic and cemented paste backfills.

## Areas of Application

- Stabilisation of cement slurries for cemented rock fills
- Stabilisation of cemented paste, cemented hydraulic fills, and high-density hydraulic fills.

## Characteristics and Benefits

- Reduced water content leading to higher in-situ compressive strengths
- Controlled setting time characteristics
- Improved slump flow characteristics
- A longer workability retention (open time)
- Provides flexibility in the scheduling of backfilling operations
- Dramatically reduces potential of pipe blockages due to control of cement hydration and setting time
  - Up to 25% increase in batches per day
  - Up to 45% decrease in flushing of pipes
  - Provides the opportunity for "Hot Change" between shifts
- Reduces piping replacement costs
- Reduces pressure losses and longer transportation distances
- Improved reliability of fill delivery and increased production
- Increased compressive strength
- Mix optimization and/or cost savings by binder reduction (cement/slag cement/flyash)
- Cleaner mixing and agitator tanks

## Performance Characteristics

### Rate of Hardening

The ambient temperature and the temperature of the backfill mixture, distribution piping, substrate and air, affect the setting or hardening rate of a backfill mixture. At higher temperatures, backfill mixtures harden more rapidly which causes problems with distribution and placement. One of the functions of **MasterRoc MF 705** admixture is to retard the set of the binder portion of the backfill. Within the normal dosage range, **MasterRoc MF 705** admixture will generally extend the working and setting times of backfills by approximately 2 to 10 hours, depending on the dosage of the admixture, the backfill materials and temperatures. Trial mixes should be made under approximate site conditions to determine the dosage required.

### Compressive Strength

Backfills produced with **MasterRoc MF 705** admixture will generally develop higher strengths than plain backfill, when the admixture is used within the recommended dosage range and under normal, comparable curing conditions.

## Dosage

**MasterRoc MF 705** admixture is recommended for use at a dosage of 200 to 700 mL per tonne of wet backfill. For dose rate per m<sup>3</sup> of fill, simply multiply the wet tonne dose rate by the wet fill density. Because of variations in backfill operations and backfilling materials, dosages other than the recommended amounts may be required. In such cases, contact your Master Builders Solutions Technical Sales Representative.

## Compatibility

**MasterRoc MF 705** admixture may be used in combination with any Master Builders Solutions admixture. When used in conjunction with another admixture, each admixture must be dispensed separately into the mix.



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## Packaging

MasterRoc MF 705 is available in 1000 litre pallecons.

## Storage & Shelf Life

Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect from direct sunlight. Store protected against freezing.

Storage stability:

Storage temperature: 5 - 35 °C

The packed product is not damaged by low temperatures or by frost. The packed product will not be damaged by high temperatures.

MasterRoc MF 705 has a shelf life of 12 months.

## Precautions

For the full health and safety hazard information and how to safely handle and use this product, make sure that you obtain a copy of the Safety Data Sheet (SDS) from our office or website.

## Disclaimer

MasterRoc-MF705 -ANZ-VI-1023

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