

# MasterRoc TCC 780

Liquid pumping aid for MasterRoc TCC system

## DESCRIPTION

**MasterRoc TCC780** is a highly effective pumping aid that makes the concrete thixotropic and easy to pump. Due to its thixotropic property, it eliminates the risk of segregation in the concrete mix. It is not a water reducer. It should, therefore, always be used in combination with one of the following admixtures : **MasterRheobuild 3000** series, **MasterRheobuild 3500** series, **MasterRheobuild 700**, **MasterRheobuild 900**, **MasterPozzolith 322N** and **MasterPozzolith LD 10**.

## RECOMMENDED FOR

**MasterRoc TCC780** can only be used in wet process shotcreting and concrete pumping. It is ideal for use in steel fibre reinforced shotcreting and where high build thickness and high early final strengths are essential , such as ;

- concrete with low cement content.
- tunnel grouting ( back filing )
- concrete with deficient grading or low fines content
- pumped concrete

## FEATURES AND BENEFITS

<b>Improved pumpability</b>	Workability independent of lean mixes or mixes with insufficient fines
<b>Does not accelerate</b>	Long open time for finishing.
<b>Low rebound</b>	Higher build per pass. Increased toughness due to reduced fibre rebound.
<b>Higher cohesion</b>	Lower accelerator dosage in shotcreting.

## PROPERTIES

Supply form	: Liquid
Colour	: Clear
Density @ 20 °C	: 1.0 ± 0.01 kg/L
pH value	: 7 – 9.5
Viscosity @ 20°C	: 300 - 700
cps Solubility in water	: Total
Chloride content	: < 0.1%

## APPLICATION

### Substrate condition

**Note : MasterRoc TCC780 is not compatible with all superplasticers. Used with Master Rheobuild 1000 and Master Rheobuild 2000 could cause instant loss of workability. Contact Master Builders Solutions for advice on compatibility with a specific**

**MasterRoc TCC780** causes a thixotropic behavior of the concrete. The workability of concrete should therefore, be measured using DIN spread table. Build thickness of 80 - 100mm per layer can be achieved in overhead situations, using MasterRoc TCC780.

### Substrate preparation

The substrate must be clean, and free from loose particles. The use of water blasting with compressed air through the shotcrete nozzle is effective. Cleaning of the substrate faces should be carried out from top to bottom. In case of a heavy water run-off from the substrate, it is recommended to drill holes at the leaking points, allow water to drain or relieve the pressure then repair using the instant setting agent **Barra Rapid T** mixed with cement before shotcreting. Consult **Master Builders Solutions** for technical help.

### Material condition

**Cement : MasterRoc TCC780** is compatible with all cements. For optimum performance, fresh, portland cement should be used since the reactivity of cement is reduced with ageing. Preliminary trials are recommended especially with sulphate resistant cement and blended cements.

### Dispensing

Use **MasterRoc TCC780** as supplied without dilution. Mix concrete first, with a part of mixing water and a super plasticiser compatible with **MasterRoc TCC780**.

**For improved pumpability :** Add **MasterRoc TCC780** during batching with the second dose of gauging water after adding the super plasticiser.

**For reducing rebound :** Introduce **MasterRoc TCC780** into the compressed air line at the spray nozzle, using a proportioning pump.

## DOSAGE

The recommended dosage of **TCC780** is 1 to 10 kg/m<sup>3</sup> of concrete depending on application.

## PACKAGING

**MasterRoc TCC780** is supplied in 205 L drums.

# MasterRoc TCC 780

## SHELF LIFE

**MasterRoc TCC780** has a shelf life in unopened original drums of 12 months, when stored between 5 °C and 50 °C.

## PRECAUTIONS

**Health :** **MasterRoc TCC780** does not contain any hazardous substances requiring labelling.

It is safe for use with standard precautions followed in construction industry, such as use of hand gloves, safety goggles, etc.

**Fire :** **MasterRoc TCC765** is not flammable.

## OTHER USEFUL PRODUCTS

**MasterRoc SA series :** A range of high performance accelerating admixtures for sprayed concrete applications.

**MasterRoc TCC Activators :** A range of speciality admixtures to be used in combination with certain selected Master Builders Solutions superplasticisers in shotcreting, for imparting such properties as instant slump loss, pumpability and total hydration.

**MasterRheobuild :** A range of high performance super plasticisers to produce rheoplastic concrete.

MasterRoc TCC780/01-01-10

<p><b>STATEMENT OF RESPONSIBILITY</b></p>	<p>The technical information and application advice given in this Master Builders Solutions publication is 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 commonwealth or State legislation. The owner, his representative or the contractor is responsible for checking the suitability of products for their intended use.</p>
<p><b>NOTE</b></p>	<p>Field service where provided, does not constitute supervisory responsibility. Suggestions made by Master Builders Solutions either verbally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not Master Builders Solutions are responsible for carrying out procedures appropriate to a specific application.</p>

## Master Builders Solutions Hong Kong Ltd

Unit 2, 20/F, EW International Tower  
 120-124 Texaco Road, Tsuen Wan, N.T.  
 Hong Kong  
 Tel: (852) 2408 4400  
 Fax: (852) 2408 4401