

# Concrete Technology in Focus

# Unique SCC Mixture Optimization Innovative Computer Software

### Introduction

A leader and pioneer in Self-Consolidating Concrete (SCC) technology, Master Builders Solutions is committed to bringing solutions to the concrete industry. SCC is revolutionizing concrete production, and now Master Builders Solutions is revolutionizing the production of SCC.

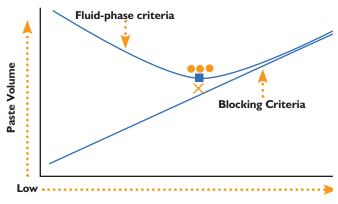
The Admixture Systems business of Master Builders Solutions has introduced a unique SCC Mixture Optimization Tool to help producers identify the best performing material and admixture combinations for specific applications. This powerful computer modeling software captures relevant data to develop a cost effective, high performance SCC mixture with excellent surface finish, eliminating the time and expense of multiple "trial and error" methods.

The tool was developed based on research and extensive studies in concrete and SCC technology. This mixture optimization tool has been successfully used to improve the performance and cost efficiency of SCC used on multiple projects in Australia, Thailand, Sweden, New Zealand and the United States.

#### **Based on Sound Scientific Concept**

This unique SCC Mixture Optimization Tool uses proven models and aggregate gradation information to optimize paste volume with respect to aggregate ratios to achieve specific plastic and hardened properties. It will account for concrete materials from different sources and considers specific structural details and construction requirements in determining the appropriate mixture proportions.





**Coarse-to-Total Aggregate Ratio** 

The SCC Mixture Optimization Tool is used to help concrete producers easily, quickly and accurately identify and develop economical concrete mixtures that will offer the following performance features:

- Excellent flow through both restricted and unrestricted spaces
- Good segregation resistance
- Excellent form-surface finish
- Low drying shrinkage

#### **Using the Tool**

If you are ready to implement or optimize self-consolidating concrete in your operations, the SCC Mixture Optimization Tool can be used to ensure the best possible mixture proportions. Producers interested in using the SCC Mixture Optimization Tool should contact their local Master Builders Solutions sales representative. Information on the SCC application, raw material characteristics and other relevant data will be gathered and sent directly to the Master Builders Solutions Technical Center in Cleveland, Ohio. Following the analysis, results and recommendations will be communicated back to the sales representative for field verification at the producer's plant. The SCC Mixture Optimization Tool has been used in projects around the world to improve the cost efficiency and performance of concrete mixtures. The analysis ensures producers can offer SCC mixtures that meet and exceed desired plastic and hardened properties.



#### **About Master Builders Solutions**

Master Builders Solutions is a leading global manufacturer of concrete admixtures, as well as other sustainable solutions for the construction industry, focussed on delivering its vision: **Inspiring people to build better.** Master Builders Solutions provides value-added technology and market-leading R&D capabilities to improve the performance of construction

materials and to enable the reduction of CO2 emissions in the production of concrete. Founded in 1909, Master Builders Solutions has ca. 1600 employees operating 35 production sites globally, supporting their customers in mastering their building challenges of today – for a decarbonised future.

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