

# MasterCell 50

Foaming agent for concrete

## Material Description

MasterCell 50 admixture is a ready to use, self-contained product for use in various regular Controlled Low Strength Materials (CLSM) or flowable fill applications where reduced densities (unit weights) and air contents of up to 35% are desired.

## Areas of Application

MasterCell 50 produced CLSM can be used in any application in lieu of compacted soil/fill. MasterCell 50 is used in CLSM mixes to lower the density (unit weight), eliminate settlement, and to control strength development. MasterCell 50 can be used in the following applications:

- Blocks Backfill (flowable fill) - sewer trenches, utility trenches, bridge abutments, retaining walls, conduit trenches, etc.
- Structural Fill - foundation sub-bases, floor slab bases, pipe bedding.

## Characteristics and Benefits

MasterCell 50 produces stable air contents of 15 to 35%. CLSM (flowable fill) produced with MasterCell 50 offers the user the following:

- Reduced water content by as much as 50%
- Increases yield
- Optimum workability can be produced in either fluid or plastic consistency
- Increases pumpability
- Little or no bleeding
- No segregation
- Reduced shrinkage
- Reduced settlement
- Control of strength development
- Cost effective compared to in place cost of compacted soil

## Application Procedure

MasterCast MasterCell 50 admixture is a powdered material packaged in a ready to use soluble bag. MasterCell 50 admixture is formulated for use in producing CLSM (flowable fill) mixes. It is not recommended for use in conventional concrete. MasterCell 50 performs best when added to mixes with an initial consistence of 25 to 75mm.

If necessary, the water content of the mix should be adjusted to obtain a maximum 75 mm initial consistence. The unopened MasterCell 50 bag is simply thrown into the truck feed hopper and mixed with the previously batched materials for a minimum of 5 minutes at slow mixing speed. It is not necessary to wash down the hopper after adding MasterCell 50.

MasterCell 50 may be added at the jobsite or at the ready-mix plant.

**Note:** Setting times may be extended when high air content producing materials are used. If an earlier load bearing (set) time is desired, an accelerating admixture may be used in the CLSM mixture.

## Test Results

Typical Performance data using CEMI or CIIIA cement	
	Mix I - 1.0 m <sup>3</sup> Load
Cement kg/m <sup>3</sup>	200
Sand kg/m <sup>3</sup>	1,430
Water kg/m <sup>3</sup>	120
EN 934-2: Table 2 admixture ml/m <sup>3</sup>	600
MasterCell 50	1 x 0.095kg bag
Typical Air Content	10 - 20%
Compressive Strength N/mm <sup>2</sup>	
@ 28 days	0.8
@ 56 days	1.0

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## Dosage

One 0.095kg bag will treat 1.0 m<sup>3</sup>. Multiple bags per m<sup>3</sup> can be added to achieve the desired performance.

Trial mixes should be carried out to ensure optimum dosage and effect.

## Compatibility

MasterCell 50 can be used with all types of EN 197 Cements. Cements containing pulverised fuel ash (PFA) can cause difficulties in obtaining a consistent & correct level of air and should be treated with caution. For use with other special cements, contact our Technical Services Department.

MasterCell 50 should not be pre-mixed with other admixtures. If other admixtures are to be used in concrete containing MasterCell 50 they must be dispensed separately.

When complimentary admixtures are required it is important that trials are performed, prior to any supply, to determine the respective dosages of any complimentary admixture, and the suitability, in the fresh and hardened state, of the resultant concrete. In these circumstances we recommend that you consult our Technical Services Department for further advice.

## Packaging

MasterCell 50 is supplied in a case containing 50 x 0.095kg (1.0 m<sup>3</sup>) bags.

## Contact Details

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Product Data	
Appearance:	White powder
Specific gravity @ 20°C:	0.70 ± 0.01 g/cm <sup>3</sup>
pH-value:	10.0 ± 1
Alkali content (%):	≤ 0.10 by mass
Chloride content (%):	≤ 0.10 by mass
Chlorine Content (%)	≤ 0.10 by mass
Logistics	
Shelf life:	12 months if stored according to manufacturer's instructions in unopened container.

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Storage conditions:	Store in original sealed containers and at temperatures between 5°C and 30°C. 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.
Handling and transportation:	Refer to MasterCell 50 Safety Data Sheet
Disposal:	Refer to MasterCell 50 Safety Data Sheet

## Disclaimer

### MasterCell 50, Master Builders Solutions UK Ltd, Version 4

#### 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

"Master Builders Solutions UK Ltd" (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.

