

# MasterAir<sup>®</sup> 303A

## Air entraining admixture for concrete

### DESCRIPTION

**MasterAir 303A** is an ultra stable air entraining admixture for use in all types of concrete. **MasterAir 303A** has been formulated to meet and exceed the requirements of ASTM C260 and relative specifications.

### FIELDS OF APPLICATION

- low slump concrete
- flowable concrete
- high temperature concrete
- concrete with extended working times
- lightweight and prestressed concrete
- for imparting workability to lean harsh mixes
- to reduced bleeding caused by grading deficiencies in the concrete materials
- increasing the entrained air content of concrete with air entraining Portland cements

### FEATURES AND BENEFITS

Entrainment of optimum air content in concrete by **MasterAir 303A** contributes to the following improvements in concrete qualities:

- Good cohesion – Reduces segregation and bleeding
- Improved ability to entrain and retain air in concrete – Increases resistance to damage from freezing and thawing.

### TYPICAL PERFORMANCE DATA

The relationship between the dosage of **MasterAir 303A** and the increase of air entrained is shown in the figure above.

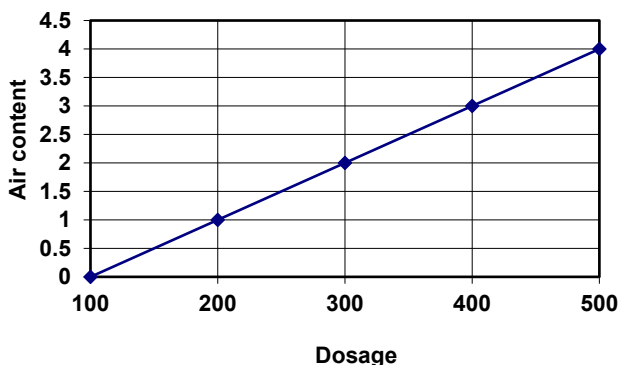


Figure 1

### Compatibility

**MasterAir 303A** is compatible with other admixtures - water reducers, accelerators and retarders.

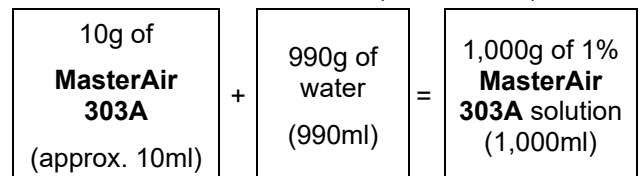
**MasterAir 303A** can be blended with a MasterPozzolith<sup>®</sup> admixture without causing any adverse chemical reaction. With conventional air entraining agents, each admixture should be added separately through a separate dispenser to the concrete mix. Blending before adding to the mix produces sedimentation that clogs the dispenser and its tubes as well as impairing the air entraining action to a considerable degree.

### APPLICATION

When **MasterAir 303A** is mixed into MasterPozzolith<sup>®</sup> solutions, agitate thoroughly before use.

You may dilute it into any solution for your job-site condition.

How to dilute **MasterAir 303A** (1 % solution)



Degree of air entrainment using 1% **MasterAir 303A** solution:

When 2ml (2g) of 1% **MasterAir 303A** solution per 1kg of cement is added into the concrete mix, an air content of 0.3% - 1.0% is usually entrained.

Measure the air content of the trial mix concrete and increase or decrease the quantity of **MasterAir 303A** as may be needed to obtain the desired air content in the work mix.

*Example: In the case of a 4.0% air content requirement:*

1. Without **MasterAir:303A** 2.5% of air content was measured in the first trial mix.
2. 1.5% (4.0% - 2.5%) of air content should be entrained, Cement content x 0.003% of **MasterAir 303A** is added into the next trial mix. In other words, 3ml of 1% **MasterAir 303A** solution per 1kg of cement should be added.

Typical factors which might influence the amount of air entrained are: quality of materials, mix design, concrete mixing time per batch, temperature, use of extra fine materials such as fly-ash, etc.

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Check the air content of the first batch and make further adjustments if needed. In mixes that require higher dosages to obtain a desired air content, consult your local Master Builders Solutions field representative.

## DOSAGE

There is no standard dosage rate for **MasterAir 303A**. The exact quantity of air entraining agent needed for a given air content of concrete is not predictable because of differences in concrete making materials and conditions.

## PACKAGING

**MasterAir 303A** is supplied in 205L steel drums.

## SHELF LIFE

**MasterAir 303A** can be stored for 12 months if stored at temperatures above 5°C, in tightly sealed original drums. If found to be frozen, thaw it and reconstitute by stirring.

## PRECAUTIONS

**Health: MasterAir 303A** does not contain any hazardous substances requiring labelling. It is safe for use with standard precautions followed in the construction industry, such as use of hand gloves, safety goggles, etc.

For detailed Health, Safety and Environmental recommendations, please consult and follow all instructions on the product Material Safety Data Sheet

### STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions publication are 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 law. The user is responsible for checking the suitability of products for their intended use.

### NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by Master Builders Solutions either orally 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.

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