

Micro-Air[®]100

Air-entraining admixture for concrete

Description

Micro-Air[®]100 is an air-entraining admixture, which creates ultra-stable air bubbles that are strong, small and closely spaced.

Applications

Entraining a controlled air content in a wide range of concrete types :

- Normal mix designs.
- Low slump concrete.
- Concrete containing high carbon content fly ash.
- Concrete containing large amounts of fine materials.
- Concrete using high-alkali cements.
- High temperature concrete.
- Concrete with extended mixing times.

Advantages

Micro-Air[®]100 is especially useful in the types of concrete known for their difficulty to entrain and maintain the air content desired. Entrainment of the optimum air content in concrete results in the following improvements to quality:

- Increased freeze / thaw resistance.
- Reduced permeability - increased watertightness.
- Reduced segregation and bleeding.
- Improved plasticity and workability.
- Increased resistance to scaling.
- Greatly improved stability of air entrainment .
- Ready to use - solution is at optimum strength for accurate dispensing.

Micro-Air[®]100 is compatible with concrete containing other admixtures or admixture systems - water-reducers, high-range water reducers, accelerators, retarders, densifiers and water

repellents. It also increases the entrained air content of concrete made with air-entraining Portland Cement.

The use of Micro-Air[®]100 with BASF Construction Chemicals SA admixtures forms a desirable combination for producing the highest quality, normal or lightweight concrete

Typical properties

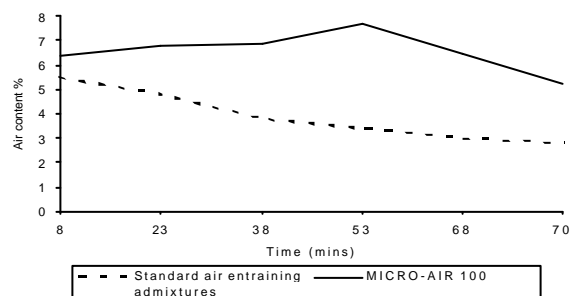
Properties listed are for guidance and are not a guarantee of performance

Specific gravity:	0.986 - 1.036
pH:	10.5 - 12.5
Colour:	Amber - brown
Dry extract (%):	11.6 - 13.5
Chloride content:	Nil to BS 5075: 1982
Flash point:	Not applicable
Freeze point:	-1°C

Standards

Micro-Air[®]100 meets the requirements of:
 ASTM C-260-86
 AASHTO M-154
 CRD-C 13-77
 BS 5075: 1982 Part 2
 DIN 1048 Part 1

Figure 1 Air content vs mixing time



Micro-Air[®]100

1. In accordance with ASTM C-182: 3 minutes mix, 3 minutes rest followed by 2 minutes final mixing.
2. 13 minutes agitation and 2 minutes mixing.
3. Retempered and 2 minutes mixing time

The graph represents the average of a number of laboratory and field evaluations data. The tests were conducted on concrete mixes known for their difficulty to entrain and maintain the desired air content. These mixtures contained large amounts of fine materials, high carbon content fly ash, high alkali cements, high concrete temperatures and low slumps.

Application procedure

As stated in ACI 212 and other publications, when two or more admixtures are used, they must be added to the mix separately (through dispensers or manually) and must not be mixed with each other prior to adding to the concrete mix.

For optimum, consistent performance, the air-entraining admixture should be dispensed on damp, fine aggregate.

Add Micro-Air[®]100 admixture to the concrete mix using a dispenser designed for air-entraining admixtures; or add manually using a suitable measuring device that ensures accuracy within $\pm 3\%$ of the required amount.

Dosage

There is no standard dosage rate for Micro-Air[®]100 admixture. The exact quantity of air-entraining admixtures needed should be determined by trial mixes. Factors are; temperature, cement, sand grading, sand-aggregate ratio, slump, means of conveying and placement, use of extra fine materials such as fly ash and micro silica.

The amount of Micro-Air[®]100 admixture used will depend upon the amount of entrained air required under actual job conditions. In a trial mix, use 100ml / 100kg of cement and adjust in the light of results obtained. In mixes containing water-reducing, set-controlling admixtures, the amount of Micro-Air[®]100 needed is somewhat less than the amount required in plain concrete.

Packaging

Micro-Air[®]100 is supplied in 200 litre drums and bulk delivery as appropriate.

Storage

Micro-Air[®]100 must be stored where temperatures do not drop below +5°C. If product has frozen thaw and agitate until completely reconstituted. Store under cover, out of direct sunlight and protect from extremes of temperatures.

Safety precautions

Micro-Air[®]100 is not a fire or health hazard. Spillages should be washed down immediately with cold water. For further information refer to the material safety data sheet.

Note

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local BASF Construction Chemicals SA representative.

Quality and care

All products originating from BASF Construction Chemicals SA, are manufactured under a management system independently certified to conform to the requirements of the quality standards ISO 9001/2000.

Whilst any information contained herein is true, accurate and represents our best knowledge and experience, no warranty is given or implied with any recommendations made by us, our representatives or distributors, as the conditions of use and the competence of any labour involved in the application are beyond our control.

As all BASF's technical datasheets are updated on a regular basis it is the user's responsibility to obtain the most recent issue.

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