

## Air entraining admixture



CE Approved – Certificate No. 0086-CPD-469071  
EN934 part 2 table 5

### Description of Product

MICRO-AIR<sup>®</sup> 115 is an air-entraining admixture which produces ultra-stable air bubbles with good size and spacing factor.

MICRO-AIR<sup>®</sup> 115 complies with:

- EN934 part 2 table 5
- C-260-86

### Fields of Application

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

- Normal mix designs
- Low slump concrete
- Concrete containing pulverised fly ash (PFA)
- Concrete containing large amounts of fine materials
- Concrete using high alkali cements
- High temperature concrete

- Concrete with extended mixing times
- Concrete containing a wide variety of cement types and sources

### Features and Benefits

MICRO-AIR<sup>®</sup> 115 is especially useful in the types of concrete known for their difficulty to entrain and maintain the desired air content.

Entrainment of the optimum air content in concrete results in the following improvements to quality:

- Increased freeze/thaw damage resistance
- Reduced permeability
- Reduced segregation and bleeding
- Improved plasticity and workability
- Increased resistance to scaling
- Increased cohesion and mobility
- Ready to use - no dilution is required

### Technical Data/Typical Properties

Appearance	Dark Brown liquid
Specific gravity @ 20°C	1.045 g/cm <sup>3</sup>
pH-value	11.5
Alkali content (%)	Less than or equal to 1.0
Chloride content (%)	Less than or equal to 0.10
Chlorine content (%)	Less than or equal to 0.10

### Application Procedure

Concrete durability research has established that the best protection for concrete from the adverse effects of freeze/thaw cycles and de-icing salts results from: proper air content in the hardened concrete; a suitable air-void system in terms of bubble size and spacing; and adequate concrete strength; assuming the use of sound aggregates and proper mixing, placing, handling and curing techniques.

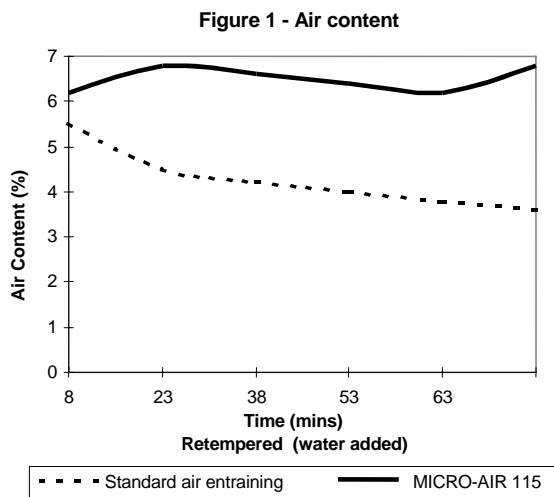
Control of air content should be based upon determinations made on concrete at the time of placement, following adjustment of the batch to proper consistency (slump). The rate of use of an air-entraining admixture depends on the air content to be obtained along with many other factors. The amount normally required is reduced by the introduction of water-reducing, set-controlling admixture.

When unusually low amounts of an air-entraining admixture are sufficient to achieve normal ranges of air content or if the required amount of air-entraining admixture necessary to achieve required levels of air content is observed to decrease significantly under given conditions, the reason for this change should be investigated. In such cases, it is especially important to determine: (a) that a proper amount of air is contained in the fresh concrete at the point of placement, and (b) that a suitable air-void system (spacing factor) is being obtained in the hardened concrete.

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

Add MICRO-AIR<sup>®</sup> 115 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.

### Typical Results



The above graph represents the average of a number of laboratory and field evaluation data. The tests were conducted on concrete mixes known for their difficulty to entrain and maintain the desired air content.

### Compatibility

MICRO-AIR<sup>®</sup> 115 is compatible with concrete containing other admixtures or admixture systems – water reducers, high-range water reducers, accelerators, retarders, densifiers and water repellents.

The use of MICRO-AIR<sup>®</sup> 115 with BASF Construction Chemicals admixtures forms a desirable combination for producing the highest quality, normal or lightweight concrete.

### Packaging

MICRO-AIR<sup>®</sup> 115 is supplied in 205 litre drums and bulk delivery as appropriate.

### Shelf Life

Minimum 12 months if stored in accordance to manufacturer's instructions in unopened containers.

### Dosage

There is no standard dosage rate for MICRO-AIR<sup>®</sup> 115 admixture. Trial mixes should determine the exact quantity of air-entraining admixture. 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 microsilica.

The amount of MICRO-AIR<sup>®</sup> 115 admixture used will depend upon the amount of entrained air required under actual job conditions. In a trial mix, use 100 ml 100 Kg<sup>-1</sup> of cement and adjust in the light of results obtained. In mixes containing water-reducing, set-controlling admixtures, the amount of MICRO-AIR<sup>®</sup> 115 may be considerably less than the amount required in plain concrete.

### Storage

MICRO-AIR<sup>®</sup> 115 must be stored in a place where temperature does not drop below +5°C. If product has frozen, thaw at +3°C and agitate until completely reconstituted. 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. For specific storage advice consult BASF IBC Admixture Systems Technical Services Department.



The Chemical Company

# MICRO-AIR<sup>®</sup> 115

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MICRO-AIR<sup>®</sup> 115, BASF IBC Admixture Systems Limited, Version 5

## 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

"BASF IBC Admixture Systems Limited" (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.