

MYK REMI-AIR AE

Air entraining admixture

Technical Data Sheet

Product Description:

MYK Remi-Air AE is a chloride free air entraining admixture. It is supplied as a translucent water white coloured solution which instantly disperses in water.

MYK Remi-Air AE acts at the interface between the mixing water and cement/aggregate particles to produce microscopic air bubbles, which are evenly distributed throughout the concrete. The entrained air enhances durability by providing protection against the rapid temperature changes found in freezing and thawing conditions and with the use of de-icing salt.

Uses:

- To produce air entrained concrete for increased durability and resistance to damage by frost and de-icing salts. Typical applications include concrete roads and bridge decks, airport runways and taxiways and other extensive areas of concrete exposed to potential frost damage.
- To improve cohesion and workability of concrete mixes where poorly graded aggregates must be used and bleeding, segregation or sand runs occur.
- As part of a combined admixture system for the production of ready mixed retarded mortar.

Advantages:

- Air entrainment increases the resistance of concrete to attack by frost and de-icing salts, reducing problems of surface scaling and concrete failure.
- Entrained air bubbles assist in the formation of a stable cohesive mix, reducing segregation and bleeding.
- Air entrainment improves workability and helps produce a dense, uniform, close textured surface free from gravel nests and sand runs, so further enhancing durability.
- Excellent air bubble stability allows use with a wide range of aggregate qualities and mix conditions.

Standards Compliance:

MYK Remi-Air AE complies with BS 5075 Part 2, BS 4887 P-I, ASTM C260 and with the Department of Transport Specification for Highway Works.

Technical support:

MYK offers technical support service to specifiers, end users and contractors, as well as onsite technical assistance in locations all over the country.

Properties:

Appearance	:	Translucent coloured liquid
Chloride content:		Nil to BS 5075
Specific gravity:		Approx 1.01 at 27°C
pH	:	Min 6.0

Factors affecting air entrainment:

Sand content: The quantity of air entrained will increase with increasing sand content - typically an increase in sand content from 35 to 45% will raise the air content from 4.5 to 6.0%.

Cement Fineness And Content: The amount of air entrained reduces with an increase in cement fineness or content.

Aggregate quality: Silt content variations can adversely affect the degree of air entrainment. This is particularly relevant to the use of crushed aggregate during inclement weather. Excessive silt content may render MYK Remi-Air AE ineffective.

Organic impurities: Carbon can reduce the effectiveness of MYK Remi-Air AE. This does not normally create a problem, but caution should be exercised when using PFA or some pigments. Where this type of material is to be a used alternative admixture are available.

Concrete temperature: A temperature increase will reduce air content. In practice, daily fluctuations are much smaller and do not cause significant variation.

Mixing and pumping: Air content will increase with increased time of mixing up to about two minutes in stationary mixers and about 15 minutes in transit mixers. Thereafter, the air content generally remains constant for a considerable period. Small losses of air may occur during pumping. With long pipelines, air content in excess of 5% may seriously reduce the efficiency of the pump.

Compaction of concrete: Prolonged vibration should be avoided. For specific technical assistance and advice on any of the above aspects, please contact MYK.

Setting time: Negligible effect at normal dosage rate.

Compatibility: MYK Remi-Air AE can be used with all types of Portland cements and is generally compatible with all admixtures. It is recommended that all admixtures be added to concrete separately.

Reduced permeability: The microscopic air bubbles introduced by use of MYK Remi-Air AE break up the capillary structure within concrete and hence reduce water permeability.

Durability: Reducing the water permeability of concrete offers increased resistance to weather exposure and attack in aggressive environments.

Frost Resistance: Addition of MYK Remi-Air AE produces controlled air space.

Compressive strength: A 15% free water reduction is often possible with MYK Remi-Air AE. This resultant increased compressive strength normally offsets the anticipated strength loss associated with air entrainment, thus producing air entrained concrete with no increase in cement content.

Resistance to Salts: Air entrainment increases the resistance of concrete to surface scaling, which is an adverse effect associated with repeated exposure to marine salts or application of de-icing salts to the concrete surface.

Application Instructions:

Typical dosage:

The optimum dosage of MYK Remi-Air AE to meet specific requirements must always be determined by trials using the materials and conditions that will be experienced in use. This allows the optimisation of admixture dosage and mix design and provides a complete assessment of the concrete mix.

As a starting point for trials a dosage of 0.08 litres/100kg of cement will typically give an air content of 5% + 1.5% in a medium workability concrete of 300 - 350 kg/m³ cementitious content. Where cement replacement

materials are used they should be included in the cementitious content for purposes of calculating admixture dosage. The presence of PFA or microsilica may increase the dosage required to obtain particular air content.

Use at Other Dosages:

Dosages outside the typical ranges suggested on this sheet may be used if necessary and suitable to meet particular mix requirements, provided that adequate supervision is available. Compliance with requirements must be assessed through trial mixes. Contact MYK for advice in these cases.

Compatibility:

MYK Remi-Air AE compatible with other MYK admixtures used in the same concrete mix. All admixtures should be added to the concrete separately and must not be mixed together prior to addition. The resultant properties of concrete containing more than one admixture should be assessed by the trial mix.

MYK Remi-Air AE suitable for use with all types of ordinary portland cement. Contact MYK for use with special cements and blends containing cement replacement materials.

Dispensing:

The correct quantity of MYK Remi-Air AE should measure by means of a recommended dispenser. The admixture should then be added to the concrete with the mixing water to obtain the best results. Contact MYK for advice regarding suitable equipment and its installation.

Curing:

As with all structural concrete, good curing practice should be maintained. Water spray or wet hessian applied curing membranes should be used.

Cleaning: Spillages of MYK Remi-Air AE can be removed with water.

Overdosing

An overdose of double the recommended measure of MYK Remi-Air AE will increase workability and air content can result in slight set retardation of the concrete. The ultimate strength of the concrete should not be impaired if

advantage is taken of the water reduction and the concrete is adequately cured.

Estimating

Packing:

MYK Remi-Air AE is supplied in 5, 20 and 210Kg drums.

Storage

MYK Remi-Air AE has minimum shelf life of 12 months in UN opened containers under normal warehouse conditions.

Precautions

Health & Safety Instructions:

MYK Remi-Air AE is non-toxic. Any splashes should be rinsed thoroughly with water. Splashes to the eyes should be washed immediately with water and medical advice should be sought.

Fire:

MYK Remi-Air AE is non-flammable.

Quality Policy:

The information given in the data sheet is based on the years of experience, and found correct to the best of our knowledge. However the success of the product & its application is dependent on many external factors. We are fully assured of our products quality at the time of dispatch. As we are constantly endeavoring to enhance the qualities of our products which may reflect changes in the data sheets. Hence in the event of any doubt on critical parameters it is advisable to consult our technical department.

Technical Support:

Technical information regarding Schomburg range of products can be obtained from the technical cell of MYK Schomburg

Note:

Information in this technical data sheet is to the best of our knowledge true and accurate. However, such conditions under which our products may be used are beyond our control, and recommendations.

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