

Mensa® Air AE900

Dispersing Air-Entraining Agent

PRODUCT DESCRIPTION

MensaAir AE900 is a dispersing air-entraining agent developed for modern binder systems with high supplementary cementitious material contents and high fineness. It integrates particle dispersion, interfacial anchoring, microbubble generation and air-void retention. Its functional molecules combine anchoring groups with balanced hydrophilic groups, hydrophobic segments and interfacial adsorption, stabilizing films at the air-water interface while regulating adsorption on cement, fly ash, slag and other fine particles. AE900 promotes a greater number of smaller, more uniformly distributed discrete bubbles, even in systems rich in fly ash, limestone powder or fines, and in complex PCE admixture systems.

KEY BENEFITS

- Controlled anchoring to mineral particles supports orderly migration of air-entraining molecules.
- Improved fine-particle dispersion and uniformity provide a more stable medium for bubble formation.
- Particle-bubble stabilization reduces bubble rise and local air accumulation.
- Generates smaller, more uniform, discrete air bubbles.
- Limits air-content fluctuations caused by unburned carbon and porous particles in fly ash.

APPLICATIONS

- All types of cement
- High-carbon fly ash
- Precast and ready-mixed concrete
- Self-compacting concrete
- Low water-to-binder ratio concrete
- Cost and performance optimization of PCE admixtures

INSTRUCTIONS FOR USE

Recommended Dosage

Recommended blending dosage: 0.3-0.4 kg of MensaAir AE900 per metric ton of polycarboxylate superplasticizer (at a 2.0% dosage). The optimum dosage depends on jobsite conditions, local materials and the target water-to-binder ratio. Consult your MENSA representative if a higher dosage is required.

Additional Application Guidance

Benefits in Fresh Concrete

Stable air content: Reduces sensitivity to variations in cement fineness, fly ash quality and SCM composition, limiting sudden changes in entrained air.

Uniform bubble distribution: Reduces bubble rise, local concentration and clustering, improving dispersion throughout paste, mortar and aggregate interfaces.

Better workability and coating: Reduces interparticle friction and improves flow, flexibility and paste coverage of aggregates.

Less bleeding and segregation: Particularly useful at low binder contents, high fly ash contents or variable aggregate grading.

Improved air retention: Stable bubble films and particle anchoring reduce bubble rupture and coalescence during mixing, hauling and pumping.

Benefits in Hardened Concrete

Optimized air-void system: Smaller average bubbles, more effective microvoids and shorter spacing at equivalent total air content.

Improved strength retention: Fewer oversized, connected or clustered voids reduce strength loss at the same target air content; air entrainment does not eliminate strength loss.

More consistent quality: Lower sensitivity to raw-material variability helps stabilize air-void structure, durability and appearance between production batches.

The information in this Technical Data Sheet reflects our current knowledge and is provided for general guidance only. No statement herein shall constitute a basis for liability. Please refer to the applicable terms of this Technical Data Sheet.

Users should verify product suitability before application testing. For technical support, please contact our technical team.

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PHYSICAL PROPERTIES

Appearance	Pale yellow to colorless liquid
Odor	Characteristic odor
Solids Content	>37%
Density	1.065 ± 0.005 g/mL
Viscosity at 25°C	40 ± 2 mPa·s
pH at 25°C	9 ± 1

PACKAGING

- 220 kg per drum
- 1,000 kg per drum

STORAGE PRECAUTIONS

- Store above -15°C. The product thaws readily without loss of performance.
- Avoid prolonged exposure to direct sunlight.
- Shelf life: >12 months. Beyond this period, determine suitability based on test results.

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