

PAVE-AIR™

Admixture for entraining air in paving concrete

REQUIREMENTS/ADVANTAGES:

PAVE-AIR™ admixture is a neutralized VINSOL* resin solution for entraining air in paving concrete mixes. It meets the requirements of ASTM C 260, AASHTO M 154, CRD-C 13 and other Federal and State specifications.

The entrainment of optimum air in low-slump, concrete paving mixes results in the following improvements in concrete qualities:

- Increased resistance to damage from freezing and thawing¹
- Increased resistance to scaling from deicing salts¹
- Reduced permeability—increased watertightness
- Reduced segregation and bleeding
- Improved plasticity and workability

¹Concrete durability research has established that the best protection for concrete from the adverse effects of freeze/ thaw cycles and deicing 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 a 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.

FEATURES/BENEFITS:

Ready to Use—Solution is the proper concentration for rapid, accurate dispensing.

Compatible for Use—PAVE-AIR admixture can be used in concrete containing other chemical admixtures— 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 PAVE-AIR air-entraining admixture and a Master Builders Masterpave™ admixture forms a desirable combination for producing pavement concrete of the highest quality.

NOTE: When two or more admixtures are used, each 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, normal or heavy-weight fine aggregate. When using lightweight fine aggregate, field evaluations should be conducted to determine the best location to dispense the air-entraining admixture—on the damp, fine aggregate or with the initial batch water.

USAGE INFORMATION:

1. PAVE-AIR admixture is a ready-to-use solution. Do not dilute or mix it with any other admixture.
2. Add PAVE-AIR 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 plus or minus 3% of the required amount.
3. There is no standard dosage rate for PAVE-AIR admixture. The exact quantity of air-entraining admixture needed for a given air content of concrete is not predictable because of differences in concrete-making materials. Typical factors which might influence the amount of entrained air are: temperature, cement, sand grading, sand-aggregate ratio, slump, means of conveying and placing, use of extra fine materials such as fly ash, etc.

The amount of PAVE-AIR admixture used will depend upon the amount of entrained air required under actual job conditions. In a trial mix, use 1/4 to 4 fl oz per 100 lb (16 to 260 mL per 100 kg) of cement. In mixes containing water-reducing, set-controlling admixtures, the amount of PAVE-AIR admixture needed may be somewhat less than the amount required in plain concrete. In mixes requiring a significantly higher or lower dosage to obtain the desired air content, consult your local Master Builders representative.

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USAGE INFORMATION *CONTINUED*

4. Measure the air content of the trial mix and either increase or decrease the quantity of PAVE-AIR admixture to obtain the desired air content in the production mix. Check the air content of the first batch and make further adjustments if needed.
- Frequent checks during the course of the work should be made since factors mentioned in paragraph 3 above may require adjustments in the PAVE-AIR dosage rate. Adjustments to the dosage should be based on the amount of entrained air in the mix at the point of placement.

5. PAVE-AIR admixture should be stored and dispensed at 35 °F (2 °C) or higher. Although freezing does not harm this product, precautions should be taken to protect it from freezing. If it freezes, thaw and reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.**
6. **CAUTION:** PAVE-AIR admixture is a CAUSTIC solution. Chemical goggles and gloves are recommended if transferring or handling large quantities of material. (See MSDS and/or product label for complete information.)

PACKAGING:

PAVE-AIR admixture is supplied in 55 U.S. gallon (208 liter) drums and by bulk delivery.

For suggested specification information or for additional product data on PAVE-AIR air-entraining admixture, contact your local Master Builders representative.

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