

AIR ENTRAINING ADMIXTURES

ADVANTAGES

- Reduces amount of concrete rejected due to low entrained air content
- Air Plus and Super Air Plus are premeasured dry materials and will not freeze
- Easily transported and dispensed
- Improves concrete workability
- Addition of Air Plus or Super Air Plus will not affect the water/cement ratio
- Entrained air content may be easily adjusted prior to job site testing
- Air Plus and Super Air Plus are packaged in water-soluble Fritz-Pak inner bags for convenient use at plant or job site.

DESCRIPTION

Fritz-Pak Air Plus and Super Air Plus are dry powdered admixtures, packaged in patented ready-to-use water-soluble bags or in bulk (50 lb bags). Air Plus and Super Air Plus are recommended for all types of air entrained concrete when an increase in entrained air content is necessary. Air Plus and Super Air Plus may also be used as primary air-entraining admixtures. Air Plus and Super Air Plus are compatible with all standard concrete admixtures.

DIRECTIONS

1. If entrained air content is below the specified level, determine which Air Plus product is required. (See Recommended Dosage Rate).
2. Each Air Plus & Super Air Plus package is double bagged. Remove the protective outer bag and add the water-soluble Fritz-Pak inner bag to plastic concrete. The entire inner bag will easily dissolve.
3. Mix at high speed for 5 to 7 minutes to insure that the Air Plus & Super Air Plus is uniformly dispersed throughout the mix.
4. If entrained air content remains below specified levels, more Air Plus & Super Air Plus may be added.

RECOMMENDED DOSAGE RATE

FOR CONCRETE:

Air Plus. One 8-oz bag (227 g) of Air Plus should increase the entrained air content for a full load (8 to 12 cubic yards or 6 to 9 cubic meters) of concrete by ¼ to 1%.

Super Air Plus. For larger increases in entrained air content, use one 8-oz bag (227 g) of Super Air Plus to

increase the entrained air content for a full load of concrete by ¾ to 2%. For use as a primary air-entraining admixture, a Super Air Plus dosage rate of 0.25 to 1.25 oz./cwt. (0.15 to 0.80 g/kg) is recommended to achieve 5 to 7% entrained air content.

Cementitious content, concrete temperature, ambient temperature or concrete mixes containing accelerators, retarders, or special admixtures such as superplasticizers or silica fume may require dosage rates outside the recommended range. Contact your Fritz-Pak distributor with any questions concerning the dosage rates for these products. It is recommended that testing be done to determine the suitability of Air Plus and Super Air Plus to your mix designs.

FOR ONE YARD TRAILER MIXERS:

Use specially packaged product in 4 oz. water-soluble bags. (Item #95661).

FOR MORTARS AND DRY BLENDED PRODUCTS:

Super Air Plus can be used as an air entraining agent for the production of mortars and other dry blended materials. Up to 16% air entrainment can be obtained with Super Air Plus. Air contents vary considerably depending on the materials used. Use the following table as a guideline:

| Desired Air Content | Dosage of Super Air Plus By weight of cement | By total weight of blend |
|---------------------|--|----------------------------------|
| 5-7% | 0.25-1.25 oz/cwt 0.15-0.80 g/kg | 0.9-4.5 oz/ton 28-141 g/MT |
| 7-10% | 1.0-4.0 oz/cwt 0.63-2.5 g/kg | 5.0-12.0 oz/ton 156-375 g/MT |
| 10-15% | 4.0-6.0 oz/cwt 2.5-3.75 g/kg | 14.0-22.0 oz/ton 438-688 g/MT |

COMPATIBILITY

Air Plus and Super Air Plus are compatible with all air-entraining admixtures, calcium chloride and other admixtures. When used with other admixtures, each one must be dispensed separately into the mix.

APPLICABLE STANDARDS

Air Plus and Super Air Plus meet ASTM C-260, AASHTO M-154 & CRD C-13 specifications.

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PACKAGING

Fritz-Pak Air Plus

- 8-oz. (227 grams) water soluble bag, 60 bags per case, 35 cases per pallet (item #95660)

Fritz-Pak Super Air Plus

- 8-oz. (227 grams) water soluble bag, 60 bags per case, 35 cases per pallet (item #95664)
- 50-lb paper bag, 40 bags per pallet (item #95667)
- 4-oz. water soluble bag, 60 bags per case, 35 cases per pallet (item #95661)

FAQs

- Q. What does increased air content do to concrete?
- A. It increases its durability by making it more resistant to damage from freezing.
- Q. Will it change the set time?
- A. No, it will not speed or slow the set.
- Q. What standards do Air Plus and Super Air Plus meet?
- A. They meet ASTM C-260, AASHTO M-154 and CRD C-13 standards.
- Q. Will these products affect the strength of my concrete?
- A. They will not significantly change strength, and they will increase durability.
- Q. What is the difference between Super Air Plus and Air Plus?
- A. Super Air Plus has twice the concentration of the active ingredient of Air Plus.
- Q. Which product should I use, Air Plus or Super Air Plus?
- A. Air Plus should be used by concrete producers who have very consistent quality in their supply of raw materials, thus only needing small corrections of air. Concrete producers that have variation in their quality of raw materials normally

experience wider fluctuations in air content and should consider using Super Air Plus.

- Q. What is the raw material used in the production of Super Air Plus?
- A. Vinsol Resin, a natural air entrainer.
- Q. Are these products compatible with synthetic air entrainers?
- A. Yes. Additionally the spacing and size of air bubbles is improved when natural air entrainers are used to correct synthetic air entrainers.
- Q. Can they be used in dry-blended materials like mortars and stuccos?
- A. Yes. See the recommended dosage rate chart.
- Q. Are Super Air Plus and Air Plus effective in concrete with fly ash containing high levels of organic compounds (i.e. high LOI)?
- A. Yes. Natural air entrainers are more effective than synthetic air entrainers.
- Q. Can I add Super Air Plus or Air Plus to water to make a liquid admixture?
- A. No. Some of the components will only dissolve under special conditions of temperature and pH.
- Q. How long have the products been in the market?
- A. Since 1992.

PRECAUTIONS

All Fritz-Pak Concrete Admixtures should be stored in a dry location, protected from breakage, deterioration and contamination. They are not subject to damage from freezing temperatures.

WARRANTY

The information and recommendations in this publication are, to the best of our knowledge, reliable. Suggestions made concerning uses or applications are only the opinion of Fritz-Pak Corporation and users should make their own tests to determine the suitability of these products for their own particular purposes. Because of numerous factors affecting results, Fritz-Pak Corporation makes no warranty of any kind, expressed or implied, including those of merchantability and fitness for purpose. Statements herein, therefore, should not be construed as representations or warranties. The responsibility of Fritz-Pak Corporation for claims arising out of breach of warranty, negligence, strict liability, or otherwise are limited to the purchase price of the materials.

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