

DELAYED SET ADMIXTURE

ADVANTAGES

- Keeps concrete in a plastic state for reuse or extended delivery time requirements.
- Fewer environmental problems associated with the disposal of waste concrete.
- Saves labor, equipment and freight cost by eliminating disposal of waste concrete.
- Eliminates the need for expensive reclaiming or recycler units with high maintenance costs.
- Improves concrete workability.
- Allows wash water stabilization for extended periods of time.
- No need for admixture dispensers because Standard Delayed Set is packaged in water-soluble bags for convenient use at the plant or job site.

DESCRIPTION

Fritz-Pak Standard Delayed Set is a dry powdered admixture, packaged in a ready-to-use water soluble bag. Standard Delayed Set is formulated to extend the setting time of concrete while improving concrete quality. It does not contain any calcium chloride or other potentially corrosive materials and is compatible with all standard concrete admixtures.

DIRECTIONS

Standard Delayed Set should be added to plastic concrete as soon as job site conditions permit. Review cement and fly ash content from batch ticket and check actual concrete temperature. As with all admixtures, the effectiveness of Standard Delayed Set is reduced as concrete age and temperature increase.

1. Calculate how much Standard Delayed Set is required. See Recommended Dosage Rate.
2. Each Standard Delayed Set package is double bagged. Remove the protective outer bag and add the water-soluble Fritz-Pak inner bag to water or concrete mix. The entire bag will easily dissolve.
3. Agitate at high speed (15 revolutions per minute) for 5 to 7 minutes to insure that the Standard Delayed Set is uniformly dispersed throughout the mix. **Improper mixing can lead to poor performance.**
4. Concrete will gain from 2 to 6 inches (5 to 15 centimeters) in slump. Air content may increase



slightly, depending on dosage rate and mix design. The concrete will gradually return to the original slump and air content when the set delay is completed.

5. Standard Delayed Set concrete may be used with or without the addition of fresh concrete.
6. If delayed set concrete must be used earlier than planned, mix concrete at high speed or add additional fresh concrete to compensate for the remaining set delay.
7. If delayed set concrete must be used later than planned and concrete has not returned to its original slump, more Standard Delayed Set may be added.

RECOMMENDED DOSAGE RATE

A good rule of thumb is 1 bag will delay 4 yards of concrete for 1 hour. For precise measurements, use 1.0-1.67 ounces per 100 pounds (0.67-1.0 grams per kilogram) of total cementitious materials for every hour of set delay required. Refer to the Standard Delayed Set dosage rates presented in Table 1. For extended or shorter delays, increase or decrease dosage proportionately. Concrete temperature, air temperature or concrete mixes containing accelerators, retarders, or special admixtures such as silica fume may require dosage rates outside the recommended range. Contact your Fritz-Pak distributor with any questions concerning the dosage rates for this product. We recommend that testing be done to determine the suitability of Standard Delayed Set to your mix designs.

COMPATIBILITY

Standard Delayed Set is compatible with all air-entraining admixtures, calcium chloride and other
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admixtures. When used with other admixtures, each one must be dispensed separately into the mix.

APPLICABLE STANDARDS

ASTM C-494 Type D, AASHTO M-194 & CRD C-87

PACKAGING

- 2-lb (908-g) water soluble bag, 18 bags per case, 24 cases per pallet (item #95200)
- 1360-g water soluble bag, 10 bags per case, 24 cases per pallet (item #95300)
- 50-lb bag, 40 bags per pallet (item #95250)

FAQs

- Q. What is the shelf life of Standard Delayed Set?
- A. If stored properly, about 1-3 years. **If the material ever seems hard or caked, do not use it. It will not break up in the mix.**
- Q. Will Standard Delayed Set affect my color?
- A. No, it will not affect color of gray concrete. If using white concrete, use Fritz-Pak Plaster Delay Set Delay Set.
- Q. Can I re-dose?
- A. Yes. If the initial concrete set has not started, you may re-dose up to three times.
- Q. What happens if I overdose the concrete?
- A. Set time will be longer, but set will still occur.
- Q. Will it change the strength of my concrete?
- A. No.
- Q. Will it react with other admixtures?
- A. No, it is compatible with most other admixtures.
- Q. Is it possible to mix for shorter times?
- A. No. Standard Delayed Set must be distributed

evenly throughout the concrete. **Short mixing times or mixing at slow speed may produce concrete with brown spots.**

- Q. The concrete already has a retarder in it; will Standard Delayed Set still work?
- A. Yes. It is compatible with other admixtures.
- Q. If the concrete has started to set, can I use Standard Delayed Set to stop and reverse the setting?
- A. No. Standard Delayed Set is only used to delay the initial set.
- Q. How do I know when setting has started?
- A. If you notice an increase in concrete temperature or a reduction in slump, concrete has started to set and Standard Delayed Set may not be able to stop the setting process.
- Q. What is the difference between Mini and Standard Delayed Set?
- A. The chemical used is exactly the same. The only difference is the size of the bag.

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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Table 1. Dosage rate for each hour of set retardation at different temperatures.

Temperature (°F/°C)	Dosage Rate oz/cwt (ounces of Standard Delayed Set per hundred lbs of cement)	Dosage Rate Grams of Standard Delayed Set per kg of cement
Cold Weather (less than 60°F or 15°C)	1.0	0.62
Normal Weather (60-80°F / 15-27°C)	1.3	0.83
Hot Weather (higher than 80°F or 27°C)	1.7	1.03