

SF-100

Low slump concrete admixture



ACEiT™

— Industries Inc. —

DESCRIPTION

ACEiT SF-100 is a proprietary concrete additive, specifically engineered for low-slump/high-strength compactable/slip form concrete mixes and Cement Treated Bases, and Roller Compacted Concrete. **ACEiT SF-100** is a blended liquid additive that is odorless, tasteless and bio-degradable. **ACEiT SF-100** can be used to reduce the total cement content and used in combination with supplementary cementitious materials (SCMs). **ACEiT SF-100** does not contain added chlorides or chemicals known to promote the corrosion of steel. It is comprised of a unique blend of concentrated uniquely processed chemistry capable of:

1. Decrease the quantity of mixing water (water/cement ratio)
2. Enhance workability of harsh concrete mixtures
3. Decrease compacted effort to achieve density
4. Increased cohesiveness of wear surface
5. Reduction in tear and sag during slip form processes
6. Predictably manage initial and final set times of concrete mixes

The combination of these attributes provides the user with a more workable mix, easier to place, slip, and finish-low slump concrete mixes and allow for a finished and tooled surface that is unsurpassed by conventional mixes. The Dosage rate will affect slump, compressive strength, workability, and w/c ratio. It is important that proper diligence be performed with mixes prior to production to determine the unique products that **ACEiT SF-100** can produce for its customers.

BATCH QUANTITY SSD

| Lab ID | Control | SF-100 |
|---------------------------------|---------|--------|
| Cement, Type VII, lbs. | 517 | 517 |
| C 33 Sand, lbs./yd ³ | 1241 | 1241 |
| #67 Stone, lbs./yd ³ | 1687 | 1687 |
| Water, lbs./yd ³ | 268 | 243 |
| ACEiT SF-100, fl. oz/cwt | NA | 4.0 |

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CONCRETE TEST DATA

| Lab ID | Control | SF-100 |
|--------------------|---------|--------|
| Air Content, % | 6.4 | 6.3 |
| Slump, Inches | 4.50 | 4.83 |
| Water/Cement Ratio | 0.52 | 0.47 |
| Unit Weight, PCF | 143.5 | 143.1 |

ASTM C 403 CONCRETE SETTING TIME

| LAB ID | CONTROL | SF-100 |
|----------------|---------|--------|
| Initial, hr:mm | 4:48 | 4:38 |
| Final, hr:mm | 6:21 | 6:08 |

COMPRESSIVE STRENGTH RESULTS

| Lab ID | CONTROL PSI | SF-100 |
|--------|-------------|--------|
| 3-DAY | 3380 | 3791 |
| 7-DAY | 4723 | 5493 |
| 28-DAY | 6066 | 6822 |

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FLEXURAL STRENGTH RESULTS

| Lab ID | CONTROL PSI | SF-100 |
|--------|-------------|--------|
| 3-DAY | 613 | 643 |
| 7-DAY | 762 | 759 |
| 28-DAY | 879 | 983 |

BENEFITS

- Can be used in conjunction with other concrete chemical admixtures, i.e., air entraining, set retarders, set accelerators shrinkage reducers, corrosion inhibitors, and micro-silica; however, each material should be added to the concrete separately. Please contact a ACEiT Sales Professional for any compatibility issues.
- Increased cement paste workability and consolidation. The use of **ACEiT SF-100** allows the user to achieve total mix workability, and increased density.
- Mixes with **ACEiT SF-100** are affected less by the environment (i.e., heat and wind) than traditional low slump mixes.
- Lower water demand to achieve similar density and strengths.
- Maintains mix design properties from the mixing source. For example, retains the component characteristics of air entrainment, slump, and other admixtures to enable them to perform as designed and specified.

DOSAGE RATE

Typical dosage rates for **ACEiT SF-100**: 3-12 ounces per 100# Cement. But the unique properties of this admixture should be customized for each material and mix that it is implemented in. We can assist in developing specific dosage ranges to achieve custom and/or specialized results.

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TYPICAL CUSTOMIZABLE DOSAGE RANGES AND RESULTS

| Product | Dose range Ounces/100 weight of cement | ASTM C-494 Type |
|---------|---|--------------------|
| SF-100 | 3.0 to 5.0 fl. oz/cwt | Type "A" & "S" |
| SF-100 | 6.0 to 12.0 fl.oz/cwt | Type "F" & "S" |

HANDLING | PACKAGING

ACEiT SF-100 is typically packaged in 275-gallon totes or bulk tankers.

DIRECTIONS FOR USE

ACEiT SF-100 can be added to the initial batch water or directly on the freshly batched concrete and mixed for approximately 5 minutes or 70 revolutions. It should not come into contact with dry cement or other admixtures until mixed thoroughly with the concrete batch. ACEiT SF-100 is dispensed with automatic equipment, thus ensuring uniformity of admixture use throughout the project.

STORAGE | PRECAUTIONS

- Care should be taken to maintain **ACEiT SF-100** above freezing; however, freezing and subsequent thawing will not harm the material if thoroughly agitated.
- Do not agitate with air.
- Add to concrete mix independent of other admixtures.
- All measures should be taken to ensure that packaging is not damaged prior to immediate use of the material and that it does not become contaminated with other materials. Should separation occur over extended period of time, recirculating material is suggested.
- In all cases, consult the Material Safety Data Sheet before use.

For additional information please visit our web site at: www.aceitusa.com or call (316) 832-0063 and ask for Matt or Richard.