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Certificate of Conformance

This is to certify that the following product was manufactured to specifications as provided to our customers, and this material has been tested and approved to those specifications. This material has been tested and is certified to meet ASTM C 494 for concrete admixtures.

Product: SP 7000

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Certificate of Conformance

ISO 9001:2008



SP 7000 is a high-performance aqueous dispersant designed for use in concrete applications. It provides fluidity to concrete slurries at substantially reduced water content. Benefits include increased productivity, lower costs and improved concrete properties.

• TYPICAL ANALYSIS

Nature: Aqueous solution of Polycarboxylate Ether

Appearance (20°C): Yellow to brownish liquid

Solids content (%): 40

pH (20°C): 4

Specific gravity (20°C): 1.07

Viscosity (mPa.s): 350

Chloride content (%): < 0.01

Alkali content (Na₂O_{eq}): < 3.5

• ADVANTAGES

SP 7000 features:

- New generation of polycarboxylate ether
- High water reduction ability
- Versatile dispersant
- Easy to formulate
- No anti foam addition needed
- Slurry stability at high dosage

SP 7000 benefits:

- Increase productivity
- Reduce costs
- Confer good pumpability to concrete

SP 7000 has been specifically designed for high range water reducing admixtures.

SP 7000 is fully compatible with the major chemicals and additives used in concrete admixtures.

• APPLICATIONS

SP 7000 uniqueness is its versatility.

SP 7000 is a high **water reducing agent**. In standard conditions, without addition of an antifoam agent, water reduction of 30% is achieved.

SP 7000 is performing in Ready Mix applications as well as in admixtures for Self Compacting Concrete and in Precast applications.

Self Compacting Concrete

SP 7000 high efficiency at low dosage in SCC and Precast application enables you to combine performance and cost efficiency. Table 1 illustrates the performance of **SP 7000** versus several high performing polycarboxylate ethers from the market. The formulation does contain CaCO₃ filler to confer consistency and compacity to the formulation. The tests conducted show that each of the three PCEs enable you to reach slumps larger than 23.6 in. This high slump level is obtained for a dry/cement ratio of 0.28% for the first two PCEs, while the test is passed with a ratio of 0.38% with the third PCE. One additional feature of **SP 7000** its ability to maintain slump. As illustrated in **Table 2** below, **SP 7000** enables to maintain a slump of 17.7 in. after 30 minutes.

Table 1 - SCC formulation example

| Component | Quantity (lb/ft ³) |
|--|--------------------------------|
| Cement CEM I 52.5 | 16.22 |
| Aggregate 4/10 | 38.68 |
| Sand 0/4 | 62.40 |
| CaCO ₃ filler Betocarb-P2 (Omya) | 14.97 |
| Water | 8.61 |

| | |
|--------------------|------|
| Water/Cement ratio | 0.53 |
|--------------------|------|



Technical Data Sheets SP 7000

Performances

Table 2

| | SP 7000 | PCE 1 | PCE 2 |
|--------------------|---------|-------|-------|
| Dispersant (lb) | 3.97 | 3.97 | 5.47 |
| Slump (in) | 23.62 | 24.80 | 25.20 |
| Fail/Pass | Pass | Pass | Pass |
| Air entrapment (%) | 3.3 | 3.3 | 3.6 |
| Slump 30 min (in) | 17.71 | 12.20 | 14.57 |
| | | | |

SP 7000 high efficiency at low dosage in SCC and Precast application enables you to combine performance and cost efficiency. Customers are faced with some limitations when using conventional PCE. Above a given dosage, the addition of PCE becomes detrimental to the slurry stability. The different components of the concrete segregate. **SP 7000** technology alleviates these limitations. High dosage rates can be used, allowing the product to reach unmatched performances.

Recommendations:

SP 7000 does not need to be formulated with defoamers.

Anti-synergistic effects have been reported when mixing polycarboxylate ethers and polynaphthalene sulfonates.

• STORAGE

SP 7000 can present colour variations from light yellow to slightly brown. These variations can occur in normal storage conditions. They have no influence on the product performances.

SP 7000 should be protected from the effects of weathering and stored between 5 and 40°C.

In these conditions, products should be used within 12 months after delivery.

• STANDARD PACKAGING

- 5 gallon pails
- 440 lb. drums
- 2200 lb. totes

• HEALTH & ENVIRONMENTAL DATA

Please refer to the Material Safety Data Sheet.

The information contained in this technical documentation relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. The information provided herein is based on technical data that Ritek's, Inc. believes to be reliable, provided that Ritek's, Inc. makes no representation or warranty as to the completeness or accuracy thereof and Ritek's, Inc. assumes no liability resulting from its use for any claims, losses, or damages of any third party. Recipients receiving this information must exercise their own judgement as to the appropriateness of its use and it is the user's responsibility to assess the material's suitability (including safety) for a particular purpose prior to such use. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used (2008/10/27).