

FARCOMENT 1000

Set Retarding Admixture

Product Description

FARCOMENT 1000 is a ready to use, synthetically set-retarding liquid admixture with low plasticizing effect.

FARCOMENT 1000 facilitates placing and finishing by providing controlled retardation of the concrete and mortars setting time, preventing premature stiffening.

● Mechanism of Action

FARCOMENT 1000 is used to slow down the reaction between cement and water by affecting the growth of the hydration products and reducing the rate of water penetration to the cement particles.

In addition to the amount of retarder, the setting time depends on type of cement, W/C ratio and temperature. Cements with low C₃A and alkali content are easier to retard compared to cement with large amounts of these constituents. One explanation is that at lower C₃A contents, smaller amounts of retarder are adsorbed, leaving larger amounts of the admixture to affect and retard the hydration of the C₃S component.

● Application

- Architectural concrete
- Prestressed concrete
- Reinforced concrete
- Pumped concrete
- Mass concrete
- Hot wither concreting

- RCC concrete
- Flatwork concrete
- Long travel distance

FARCOMENT 1000 as a set retarding admixture is used primarily to offset the accelerating effect of cement at high ambient temperature and to keep concrete workable during the entire placing period thereby eliminating form - deflection cracks.

FARCOMENT 1000 also is used to keep concrete workable long enough so that succeeding lifts can be placed without development of cold joints or discontinuities in the structural unit.

● Advantages

- Controls rate of set
 - Improved finish ability
 - Improved workability
- Reduced shrinkage and cracking
- Increased final strength
 - Controls heat of hydration

● Standard Compliance

FARCOMENT 1000 complies with:

- ASTM C 494 Type B
- EN 934-2 - Table 8
- ISIRI 2930 - Table 9

● General Properties

| | |
|------------------------|---------------|
| Ionic nature | anionic |
| Appearance | Yellow liquid |
| PH | 8±1 |
| Specific Gravity(kg/l) | 1.18±0.02 |
| Chlorides (PPM) | Max 500 |



FARCO MENT 1000

Typical Performance

Test performed in accordance with the standard method EN 196-1, EN 196-3

Experimental Result 1

| Admixture | Initial setting time | Compressive strength(kg/cm ²) | | |
|----------------|----------------------|---|--------|---------|
| | | 1 day | 7 days | 28 days |
| FARCOMRNT 1000 | T + 8.00h | 10 | 440 | 610 |
| reference | T | 76 | 400 | 530 |

| Mix design | W/C | Cement | Sand | Dosage |
|------------|-----|----------|-------|--------|
| | 0.5 | C:A < 4% | EN196 | 0.3% |

Experimental Result 2

| Admixture | Initial setting time | Compressive strength(kg/cm ²) | | |
|----------------|----------------------|---|--------|---------|
| | | 1 day | 7 days | 28 days |
| FARCOMRNT 1000 | T + 8.00h | 40 | 430 | 580 |
| reference | T | 100 | 380 | 450 |

| Mix design | W/C | Cement | Sand | Dosage |
|------------|-----|----------|-------|--------|
| | 0.5 | C:A < 4% | EN196 | 0.4% |

Dosage

FARCOMENT 1000 is normally dosed at a rate of 0.2 - 0.6% by weight of CM.

- Higher dosages maybe utilized for special conditions and applications.
- Dosage recommendations depend on the characteristics of the mix design.
- Field testing is recommended to determine optimum dosage and effects on both plastic and hardened concrete properties, such as: workability and workability retention, setting time, early and ultimate strength.

Method of Use

- FARCOMENT 1000 is supplied ready for use and is completely miscible in water.
- It can be added in to the mixer at the same time as the mixing water.
- It should not be added directly to the cement or dry materials.
- FARCOMENT 1000 may be added at the end of mixing process by dispensing equipment or it may also be added to the concrete in a drum of ready mix truck, it should be mixed at least 1 minute per m³ of concrete at high speed.

Compatibility

With Cements

FARCOMENT 1000 is suitable for use with cement replacement materials e.g. Fly ash, silica fume and blast furnace slag cement concrete.

With other Admixtures

FARCOMENT 1000 should not be premixed or used with other admixtures unless receive the approval from manufacturer. We would recommend that SHIMISAKHTEMAN be consulted in such circumstance.

Packaging

FARCOMENT 1000 is supplied in 20kg gallons and 250kg drums.

Storage

Storage is recommended to keep within the

FARCO MENT 1000

range of 5°C to 40°C. If product has frozen, thaw and agitate until completely reconstituted.

Keep out of direct sunlight.

● Shelf life

12 month when FARCOMENT 1000 is kept under the recommended conditions and stored in unopened and undamaged original sealed containers.

● Safety and Handling Precautions

FARCOMENT 1000 is a low-hazard sub-

stance it does not irritate skin and retina under normal conditions. But in the line with general handling precautions to avoid contact with skin or eyes, protective gloves and goggles should be worn.

● Technical Service

The SHIMISAKHTEMAN Technical Service Department is available to assist you in the concrete problems in the field and correct use of our products.



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