CapcoCrete® SRC4060

Superplasticizer/ High-Range Water-Reducing with High Slump Retention

CapcoCrete SRC4060 is a concrete superplasticizer having a high slump-retention property within a period of 60 minutes. The slump-retention property of this product is based on the chemical structure of the resin Polycarboxylate used in it and does not have any slow-setting admixture. Also, the concrete produced by this superplasticizer does not lead to a reduction in the initial strengths.

This product is produced based on the general requirements of the Iran National Standard No.2930-1 and the performance requirements of tables 1-3 and 2-3 of the Iran National Standard No.2930-2. Moreover, this product meets the requirements of grade F of the ASTM C494 Standard and Table 1 of the EN934-1 Standard and Tables 1-3 and 2-3 of the EN 934-2 Standard.

The physical and chemical properties of the CapcoCrete SRC4060 are according to the following table and produced in the allowable changing range in the Iran National Standard No.2930-1.

Physical State	Dense Liquid
Color	Colorless to yellow
Chemical Base	Polycarboxylate Ether
Density	1/1 ± 0/02 g/cm3
Chloride Content	Little
The equivalent Alkaline Substance	0.9%
pH	6 ± 1
Freezing Temperature	-2°C

The usage and effect of the admixture on concrete

The usage of the admixture in concrete

- The production and implementation of reinforced and unreinforced concrete
- Production of concrete with high consistency and low water-to-cement ratio
- Different concrete casting at normal temperatures
- Using ready-to-use concrete with the water to cement ratio of less than 0.45
- Making concrete with high slump retention

The advantages of using the admixture in concrete

- Reducing the water-to-cement ratio in an equal consistency and increasing the 7 and 28-day compressive strength
- The capability to retain slump within a long period without increasing the setting time
- The capability to carry ready-to-use concrete within long distances without a significant change in the consistency
- Reducing the water penetration and permeability due to reducing the water-to-cement ratio
- A better distribution of the cement, improving compaction in different conditions, and increasing the compressive strength in an equal water-to-cement ratio
- Improving the pumping of the concrete

The effect of the admixture on fresh concrete

- It significantly increases the consistency in a constant water-to-cement ratio and reduces the water-to-cement ratio in a constant consistency
- It increases the concrete workability
- It does not change the initial setting time of the standard mortar for more than 30 minutes in a congruous dosage
- It does not change the final setting time of the standard mortar for more than 60 minutes in a congruous dosage

- The production of air bubbles in the fresh concrete is controlled in a way that the changes in the air percentage remain in the allowable standard range announced in the properties sheet.

The effect of the admixture on the hardened concrete

- It increases the 7-day and 28-day compressive strength to some extent in equal water-to-cement ratio and air bubble percentage
- It improves the finished surface of the concrete due to increasing the random air bubble exit from the concrete.

The instruction to use the admixture in the concrete

The allowable range of using the admixture in the concrete

The allowable range for using The CapcoCrete SRC4060 is from 0.5% to 1.5% of the cement material weight (500 to 1500 grams per 100 kg of cement content including cement, silica fume, slag, fly ash, and other similar pozzolans). Specifying the optimum amount of the admixture should be accomplished with respect to the properties of the mix design and the implementation and weather conditions, and finally making the test mixes. The excessive use of admixture may result in the separation of components and concrete bleeding. It should be noted that the slump retention of the concrete within a long time reduces in case of reducing the dosage.

The instructions to add admixture to concrete

To use the admixture, it is necessary to dilute the admixture with water twice the volume of the admixture and add it to the concrete. It is also necessary to take the following notes into consideration:

- Mix the concrete for 2 to 5 minutes after adding the admixture and assure the uniform distribution of the admixture in the concrete. It is better to mix the concrete mix for 2 to 10 minutes and then add the admixture to obtain the best result.
- Avoid the direct contact of the admixture with the dry cement and aggregates
- Subtract the water used to dilute the admixture and the water as much as the admixture volume (Before adding to the concrete) from the mixing water of the concrete.
- In the case of increasing the slump of the fresh concrete it is necessary to obtain the mix design in a way that does not result in the separation of the components and concrete bleeding.

Safety tips for using the admixture

This product is not categorized as a dangerous substance; however, it can be allergic to contact with the skin. Therefore, it is necessary to use a suitable gown, goggles, and mask while working and take the following tips into consideration:

- Blink in water for at least 15 minutes in case of eye contact
- Wash your skin with clean water for 15 minutes in case of any contact with the skin.
- The contaminated clothes must be washed with suitable detergents to be usable for further work.
- It is necessary to visit a doctor if the injured individual still feels uncomfortable

Other necessary notes in using the admixtures

Compatibility of admixture with other products

The simultaneous use of this product with other admixtures of Capco Company is allowed except for the products based on Naphthalene in a mix design. However, it is necessary to batch each admixture separately and then add it to the concrete mix.

The corrosion of admixture

This product does not start or extend corrosion in the buried bars in concrete, the pre-stressed steel, floor systems, and the roof made of galvanized steel. No Calcium chloride or any other compounds containing chloride is used in producing the CapcoCrete SRC4060.

Transportation and storage of the admixture substance

The conditions and maintenance temperature of transportation

The allowable transportation and maintenance temperature of this product is between 5 and 25 ˚C. It is also necessary to consider the following tips:

- Avoid putting the container having the admixture in direct exposure to sunlight
- Prevent the admixture from freezing

The admixture lifetime

If the containers of this product are conserved and stored in a standard condition, they will be usable for 18 months.

The admixture substance packaging

This product is supplied in 20 Kg gallons, 220 Kg barrels, and 1100 Kg Pallets.

Complementary information

Contact the technical section of Capco Company for complementary information. You can also refer to the performance form of (CapcoCrete SRC4060-PPI) SRC4060 for more information on the performance of this product and its efficiency in the characteristics of fresh and hardened concrete.