

Betonex

Expansion/Plasticizer for cement mortar and concrete

Betonex is a powder product containing expansion and plasticizer materials of mortars and cement grouts that are used in cement combinations that require high strength and expansion.

This product can be assessed based on the requirements mentioned in the ASTM C1170 and ASTM C845 Standards.

The physical properties of the product are based on the following table and are produced in the allowable changing range.

Physical State	Light brown powder
Chloride	Standard Range

The usage and effect of Betonex

Usage of Betonex

- Grouting of subgrades
- For all types of anchorage systems
- Grouting of ducts
- pre-cast concrete sections

The advantages of using the Betonex

- Without any shrinkage before the first setting
- Increasing the strength of the hardened product
- High density and low permeability
- High durability
- Reducing the cracks due to shrinkage
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- Increasing the consistency of the cement paste

Instructions to use the Betonex

The allowable range of using the Betonex

The allowable range of using the Betonex is 0.5% of the weight of the cementitious material (500 gr per 100 kg of cement material 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.

How to mix Betonex in concrete and mortar

The cement grout in which the sand is not used, approximately 40 to 45 liters of water, 100 Kg cement, and 500 gr Betonex makes 70 liters of grout approximately. To produce grout, a 2:2:1 weight ratio (water, cement, sand) with 0.5% of the weight of the cement material Betonex is used.

For grouts or concretes having a sand-to-cement ratio of more than 1, 4 of 250 gr packages of Betonex are used. The way of producing grout is that enough water is poured into a suitable tank, and sand and Betonex are added while mixing cement. Mixing should last 5 minutes so that a homogenous uniform grout is obtained.

The desired grouting surface should be completely clean and moist before preparing the grout and molded suitably. Grouting should be accomplished at most 15 minutes after mixing so that its expansion properties are obtained efficiently. The free expansion of the final mixture should be obtained up to 4%. The Betonex has a great effect on the setting time of the concrete mixture or grout. Suitable curing must be accomplished after grouting. Using the

Capcure O of Capco Company is recommended for this purpose.

Safety tips while using the product

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

- Avoid pouring this product into the workplace
- 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 about Betonex

Avoid using polycarboxylate-based plasticizers to increase consistency with Betonex. The Betonex is not compatible with Portland cement.

The corrosion of Betonex

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.

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 0 and 35 °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 12 months. It is noteworthy that the product must be used immediately when it is opened.

Complementary information

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