

## CapcoBond AS300 Epoxy Grout Anchor Bolt

Epoxy grout anchor bolt (CapcoBond AS300) is a three-component product based on Epoxy Resin which is used to install rebar and/or bolt in hardened concrete. This product contains three main parts including part A that is a combination of Epoxy resin, part B that is the stiffener of epoxy resin, and part C that is the filler of this product and is a combination of aggregates with suitable gradation. This product is a polymer mortar which uses epoxy polymer instead of cement. High mechanical and chemical strength are the main characteristics of this product. This product is mainly used for high mechanical and chemical purposes due to its high cost.

This product is produced based on the standard requirements of ASTM C881/C881M. The physical and chemical properties of CapcoBond AS300 are according to the following table and in the allowable changing range.

Physical State and Color	Component A: Clear Liquid
	Component B: Amber Liquid
	Component C: Gray Powder
The Specific Gravity at 20°C	Component A: 1/14 ± 0/02 g/cm <sup>3</sup>
	Component B: 1/02 ± 0/02 g/cm <sup>3</sup>
	Component C: 1/58 ± 0/05 g/cm <sup>3</sup>
	Mixture: 1/78 ± 0/05 g/cm <sup>3</sup>

### The usage

#### The usage of the product

- The installation of bolt and rebar inside the hardened concrete

#### The advantages of this product

- The excellent adhesion to the concrete surfaces
- It is high chemical resistant against the petroleum, sea water, and Ammoniac oil.

- High mechanical resistance without shrinkage

#### The properties of the fresh paste

The details and properties of the fresh paste are as follows:

- The maximum workability time period at 25 °C is 30 minutes after production
- The maximum time period of hardening at 25 °C is 8 hours after production

#### The properties of the hardened paste

The hardened paste has high strength at all ages. Furthermore, this product has high durability and low permeability. Also, the compressive strength of poly patch EPV based on the ASTM C579 and other properties are as follows:

- The minimum 1 day compressive strength 60 MPa
- The minimum 7 days compressive strength 80 MPa
- The minimum 7 days flexural strength 25 MPa
- The minimum Pull off strength to concrete 3.5 MPa
- The minimum Pull off strength to the rebar 12 MPa
- The workability time period at 25°C 20 minutes
- The hardening time period at 25°C 8 hours

#### The dosage and instruction to use

- The holes are drilled with a suitable drill. The maximum diameter of the hole is 6 mm bigger than the diameter of the bolt. The depth of the holes should be at least 5 times the diameter of the bolt and the depth can be increased to 10 times for heavy structures with high seismic stress.
- The volume of the holes is calculated and the paste is produced by 60% of the volume of the holes. 2.1 Kg paste must be produced per liter.

- The required paste is mixed in a mixer with a low speed (the maximum 400 rounds per minute) to make the mortar. First, component B is added to component A and mixed for 2 minutes, and mixing will continue to reach a uniform mixture. Then the powder component C is gently added to the working mixer to obtain a homogenous mixture. (Each 5 Kg package (all components) will have 2.37 liter volume after mixing)
- Fill the paste from the bottom of the hole to 60% of the depth of the hole by using a gun or a special pump.
- Then the bolt is conducted from the center of the hole to the end of the hole through a circular movement. The bolt should be at least 1 cm away from the end of the hole.
- It is necessary to watch over the bolt for 24 hours to avoid any stress and movement.

#### **Noticeable notes for implementation**

- The execution operation should be accomplished between 20 to 25°C. The implementation at temperatures higher than 30°C is not recommended and it is better to start repair by cooling the environment and different components of the product.
- Never put the material in the direct exposure of sunlight before mixing
- The provided paste must be used within 20 minutes with respect to the workability of the product.
- Repair tools must be cleaned with a suitable dissolver after the implementation is finished.
- Never dilute this product with a dissolver

#### **Safety tips when using the product**

The components of this product are harmful to body therefore, it is necessary to use a suitable gown, goggles, and mask while working. Also, this product is flammable, so avoid smoking Cigarettes, welding, etc.

It is also necessary to take the following tips into consideration:

- Blink in water for at least 15 minutes in case of eye contact. Then visit a doctor.
- 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

#### **Transportation and storage of the product**

##### **The conditions and temperature of storing and transportation**

The allowable transportation and storage temperature of this product is between 5 and 30 °C. It is also necessary to consider the following tips:

- Avoid putting the product in direct exposure to sunlight.
- Avoid putting the powder component in the exposure to moisture

### **The durability of the product**

If the containers of this product are conserved and stored in a standard condition, they will be usable for 12 months.

### **Packaging**

The components of this product are packaged and supplied according to the following proportions:

- Component A: 2
- Component B: 1
- Component C: 7

### **Complementary information**

Contact the technical section of Capco Company for complementary information. You can also refer to the performance form of (CapcoBond AS300) AS300 for more information on the performance of this product.