



# CapcoGum<sup>®</sup> VMA

## Viscosity Modifying Agent

CapcoGum VMA is a ready-to-use powder that is used to increase the viscosity of fresh concrete. This product controls bleeding of the fresh concrete and therefore increases the strength of the concrete against segregation and facilitates concrete casting.

This product is produced based on the general Iran National Standard No. 2930-1 and the performance requirements of Table 13 in the Iran National Standard No. 2930-2. Also, this admixture meets the requirements of Table 13 of the EN 934-2 standard.

The physical and chemical properties of the CapcoGum VMA are according to the following table.

(The previous name of this product was Plastit VMA)

Physical State	Powder
Color	White
Bulk Density	0/7 ± 0/05 g/cm <sup>3</sup>
Chloride Content	Little

### The usage and the effect of the admixture

#### The usage of the Viscosity Modifying Agent

- The production of the self-compacting concrete
- It facilitates the pumping of the concrete within long distances
- Underwater concrete casting
- It can be used in shotcrete
- It is used in concrete with fine grading
- Making the grout behind segments
- The production of lightweight concrete with high viscosity

#### The advantages of using the Viscosity Modifying Agent

- Improving the static and dynamic stability of the concrete

- Reducing the risk of segregation in concrete
- Reducing the risk of bleeding in concrete
- Reducing pressure in the pumping of the concrete
- Increasing cohesion in shotcrete

### The Instruction to use the admixture

#### The allowable range of using the Viscosity Modifying Agent in the concrete

The allowable range for using The CapcoGum VMA is from 0.4% to 2% of the cement material weight (400 to 2000 grams per 100 kg of cement materials 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 instruction to mix the viscosity modifying agent in concrete

The calculated amount must be weighed and added to the mixer gradually. The rate of adding must be in a way that prevents the cohesion and agglomeration of this product. Remember to avoid wetting this product before adding it to the mixer. Also, it is necessary to take the following notes into consideration:

- Mix the concrete for 3 to 5 minutes after adding the admixture and assure the uniform distribution of the admixture in the concrete.
- Avoid wetting this product before adding it to the mixer

#### Safety tips when using the viscosity modifying agent

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:

- 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 the admixtures**

#### **The compatibility of the viscosity modifying agent with other products**

The simultaneous use of this product with other admixtures of Capco Company requires complementary tests in a mix design.

#### **The corrosion of the viscosity modifying agent**

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 CapcoGum VMA.

### **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 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 viscosity modifying agent lifetime**

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

#### **The admixture substance packaging**

This product is supplied in 20 Kg bags.

#### **Complementary information**

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