V-MAR® 5

Rheology Modifying Concrete Admixture

Product Description

V-MAR® 5 is a highly efficient rheology modifying admixture specifically designed for the production of concrete with improved handling and processing characteristics. It enables pump mixes to be more easily and economically produced, as well as increasing tolerance to water variations or poorly graded aggregates. It is beneficial in improving cohesion of all concrete mix designs, including high quality Self Compacting Concrete and can be used to reduce segregation, bleed and settlement of the mix constituents.

V-MAR® 5 can be used over a wide dosage range to produce a range of concrete mix designs that have excellent plastic and hardened properties.
V-MAR® 5 is based on modified hydroxylated polymers that have excellent suspending properties without excessive viscosity increase. It is manufactured under controlled conditions to give a highquality consistent product.

Advantages

- V-MAR® 5 be used to produce Self Compacting Concrete which has excellent rheology
- Can allow the use of materials that would not be considered ideal for Self Compacting Concrete
- Can enable the reduction in powder contents of Self Compacting Concrete Mixes
- May allow the use of difficult shaped or poorly graded aggregates to be used
- V-MAR® 5 enhances pumpability of concrete mixes, reducing pump pressures and increasing distance concrete can be pumped
- Reduces tendency of concrete to bleed
- Enables production of Piling concrete mixes without bleed or segregation at lower powder contents
- V-MAR® 5 has minimal impact on setting time and excellent early age strength development
- Used for pumping of lightweight concrete
- Can be used to produce Underwater concrete, minimising segregation and loss of paste volume

Typical Properties

V-MAR® 5	
Appearance	Straw coloured liquid
Chloride Content	Nil
Air Entrainment	1.0% under normal conditions

Method Of Use

V-MAR® 5 is supplied ready for use.

When adding to a concrete mix it should be added in its supplied form with part of the batching water, after the addition of the cementitious component.

Compatibility with Cements

V-MAR® 5 can be used with all types of cements, including limestone cements. It is also effective in concretes containing pulverised fuel ash or ground granulated blast furnace slag, however some reduction in dosage rate may be necessary For use with special cements we recommend you contact GCP Applied Technologies.

Compatibility with Other Admixtures

V-MAR® 5 should not be premixed under any circumstances with other admixtures. The performance of the product will be affected by the presence of other chemicals and we recommend that GCP be consulted in such circumstances.

Addition Rates

Range	100 ml -500 ml per 100 kg cement
	0.10%-0.50% (v/w) by wt. of cement
As a guide to trials an additional leval of 150 ml - 300 ml per 100 Kg of cement is recommended.	
For advice and assistance with trials we recommend that you consult GCP Applied Technologies.	

As with most products of this type the magnitude of the effect obtained with V-MAR® 5, is governed by the quantity of product used, water-cement ratio, and the specific nature of the concrete and constituent materials. It is necessary, therefore, to assess performance under site conditions using actual materials to determine optimum performance and dosage and effect on both plastic and hardened concrete properties such as cohesiveness, workability retention, setting characteristics, rate of early strength gain, ultimate strength and shrinkage where these are of importance.

Effects of Overdosing

The effects of overdosing V-MAR® 5 are a function of the degree of overdose. When producing high workability concrete, overdosing will reduce the initial workability and may increase the water demand of the concrete mix. Depending on the extent of the overdose, an increase in the setting time may also occur, especially in low temperatures and/or when employing sulphate resisting cement or cement replacement materials.

In any situation where overdosing is suspected, a careful inspection of the concrete in its plastic state should be conducted. Particular attention should be paid to consistency and cohesiveness, prior to a decision on the suitability of the concrete for the particular application in question.

Dispensing

It is preferable that V-MAR® 5 should be introduced into the mixer by means of independent automatic dispensing equipment. Such equipment or advice on dispensing can be obtained from GCP Applied Technologies.

Health and Safety

For further information on Health and Safety matters regarding this product we recommend that you consult the relevant Safety Data Sheet from GCP Applied Technologies.

Packaging and Storage

V-MAR® 5 is supplied in 205 non returnable drums and 1,000 litre totes. Alternatively, bulk deliveries can be arranged. V-MAR® 5 should preferably be stored away from extremes of cold or heat. The product should be kept out of direct sunlight in shaded storage at all times.

Storage Life in Manufacturer's Drums:
12 months from date of manufacture.

Storage Life in Bulk Storage:
12 months from date of delivery.

Technical Service

Our Technical Service department of GCP Applied Technologies is available to assist you in the correct use of our performance chemicals.

GCP Applied Technologies (UK) Ltd, Gate St, Dukinfield SK16 4RU.

GCP Applied Technologies Inc., 2325 Lakeview Parkway, Alpharetta, GA 30009, USA

GCP Applied Technologies (UK) Ltd, 487-488 Ipswich Road, Slough, SL1 4EP

Last Updated: 2023-06-13
gcpat.uk/solutions/products/v-mar-5