MIRA® 53

Mid-Range Water Reducing Admixture

Product Description

MIRA®53 is a new generation Mid-Range water reducer designed to assist concrete producers with improved production economics.

The advanced formula of MIRA®53 develops significantly greater later age strengths than traditional Mid-Range water reducers, allowing cement content economics.

The product can be used in a wide range of applications, and will develop higher ultimate strength than MIRA®52. The choice of the most appropriate product should generally be based on full concrete trials.

MIRA®53 is based on blended modified lignosulphonates and is a powerful deflocculant. Depending on addition rate, MIRA®53 conforms to EN 934-2.

Advantages

- MIRA® 53 yields exceptional ultimate compressive strength and is effective over a wide range of cement contents.
- Imparts excellent consistence retention.
- Produces plasticised and high-consistence concrete when used at increased dosages.
- Exhibits predictable retardation characteristics.
- Compatible with ggbs and fly ash concretes.
- Increases cement economics.
- Aids cohesion of concrete.
- Multi-role capabilities.

Typical Properties

Appearance	Dark Brown Liquid
Specific Gravity (20°C)	1.210
Alkali Content (eq.Na_2O)	3.70%
Chloride Content	Nil
Air Entrainment	1.0-2.0 %
Freezing Point	0°C

Method Of Use

MIRA®53 is supplied ready for use. When producing high consistence concrete it should be added in its supplied form with part of the batching water after the addition of the cement.

After the addition of MIRA®53, a further mixing cycle of at least two minutes is recommended to enable MIRA®53 to efficiently disperse the mix constituents.

Compatability

With Cements:

MIRA®53 can be used with most types of Portland cements. It is also effective in concrete containing fly ash or ground granulated blastfurnace slag.

For use with special cements we recommend contacting GCP Applied Technologies.

With Other Admixtures:

MIRA®53 is fully compatible with all GCP admixtures normally used in concrete production.

Each admixture must be added separately. Individually added, each will deliver exactly the results desired.

However, the performance of the material may be affected by the presence of other chemicals and we would recommend that GCP be consulted in such circumstances.

Addition Rates

Range	400 ml -800 ml per 100 kg cement
	0.40% -0.80% (v/w) by wt. of cement
As a guide to trials an addition rate of 0.50% volume by weight of cement is suggested.	
For advice and assistance with trials we recommend that you consult GCP Applied Technologies.	

MIRA®53 is a versatile, high performance product that benefits from a wide variety of applications. As with most products of this type, level of effectiveness is governed by the quantity of product used and the specific nature of the concrete mix.

The performance of MIRA®53 is best assessed after preliminary tests using the actual concrete materials to determine the optimum dosage and effect on both plastic and hardened concrete.

Effects of Overdosing

As dosage is increased throughout the recommended range, concrete consistence and retardation of set also increase. These effects will be more pronounced when using cement replacement materials.

Overdosing, particularly in cold weather; could be accompanied by retardation of set of the concrete. Providing overdosed concrete is properly cured, the ultimate strength will generally be higher than that of a normal concrete.

Planned overdosing outside the recommended range should be further discussed with the Technical Service department of Grace Construction Products.

Any situation where an overdose is suspected, careful inspection of the concrete in its plastic state should be conducted. Particular attention 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 the MIRA®53 should be introduced into the mixer by automatic dispensing equipment. Equipment or advice on dispensing can be obtained from GCP.

Health and Safety

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

In line with general chemical handling precautions avoid contact with skin or eyes and protective gloves/goggles should be worn.

Packaging

MIRA®52 is supplied in both 15 and 205 non returnable drums and 1,000 litre totes.

Alternatively, bulk deliveries can be arranged.

Storage

MIRA®53 should be stored away from the extremes of temperature and then protected from frost. If the product does freeze, it should be thawed and carefully re-mixed before use. 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.

North America customer service: 1-877-4AD-MIX (1-877-423-6491)

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