

CIKOflow HY4000

New generation low range concrete plasticizer



Description

CIKOflow HY4000 is a low range water reducing super plasticizer based on modified polycarboxylic ether. It increases the dispersion of cement particles by electrostatic repulsion and steric hindrance that enables the water content in the concrete to perform to maximum efficiency accounting to lesser water-cement ratio with improved workability.

CIKOflow HY4000 is highly suitable for low water-cement concrete mixes maintaining higher workability to produce high strength concrete. It exhibits prolonged workability retention especially in high ambient temperatures.

Properties

- Better dispersion of cement particles with small adsorbed area.
- Exhibits combined properties of high-water reduction and prolonged workability retention.
- Maintains concrete flowability over a long time.
- Provides high early compressive and flexural strengths.
- Low water cement ratio yields to low permeability.
- Reduction in permeability, yielding to increased durability.

Application Area

CIKOflow HY4000 is suitable for all kinds of high strength, high cement content and low water cement ratio concrete. Typical application includes:

- Self-compacting concrete
- Hot weather concreting that demands prolonged workability retention
- Precast concrete for early high strength.
- More suitable for congested reinforcement
- To avoid cold joints
- To obtain low heat of hydration

Applicable standards

- CIKOflow HY4000 complies with ASTM C-494 type B, D and G.
- Comply with Qatar Construction Specification QCS

Physical properties

Form	Liquid
Colour	Clear to Light yellow
PH Value	4-6
Specific Gravity	1.045 ± 0.02 at 25°C
Water Soluble Chloride Content BS EN 480-10	<0.01%
Compatibility	Compatible with all types of cement

Dosage

The normal dosage is 0.5 to 3.0 litres per 100kg cement which includes replacements (if any) such as microsilica, GGBFS, calcined clay (metakolin) and fly ash.

The optimum dosage should be determined by conducting laboratory/site trials considering proposed mix design, ambient conditions and performance requirements.

Usage instructions

CIKOflow HY4000 is a ready to use concrete admixture. Required/calculated amount of CIKOflow HY4000 should be measured by means of measuring jar or dispenser and should be added to concrete during mixing process preferably after dispensing 70% of total water.

To attain optimum efficiency of the admixture, it is always recommended to dose CIKOflow HY4000 to wet concrete mix. This can be done by mixing 70-75% of the total water with all other ingredients of concrete followed by the addition of CIKOflow HY4000 diluted with remaining 25-30% water.

NOTE: CIKOflow HY4000 should not be mixed with dry/lump concrete.

Compatibility

CIKOflow HY4000 compatible with all types of cement, fly ash class C and F, GGBS, microsilica and fibers.

With other admixtures

In case of conjunction of CIKOflow HY4000 with other types of admixture, please consult CIKO technical service department for assistance.

Packaging

CIKOflow HY4000 is available in 200 L drum and 1000 L IBC tank.

Shelf life

CIKOflow HY4000 has a minimum shelf life of 12 months if stored in accordance with CIKO instructions.

Storage

CIKOflow HY4000 should be stored under enclosed shaded area at temperatures between 7°C and 35°C.

Precautions

- Dosage shall not be more than the maximum limit.

Effect of over dosage:

Over dosage to the extent of double the recommended dosage of CIKOflow HY4000 will result in delayed setting time and increased workability.

Health & Safety

CIKOflow HY4000 should not come in contact with eyes or to be swallowed. If comes in contact with eyes, flush with plenty of fresh water and seek medical advice.

CIKOflow HY4000 is water-based material and non-flammable.

Refer Material Safety Data Sheet for further details.

Technical Support

For any technical support, do not hesitate to contact CIKO team at any time as CIKO offers on and off-site services to end users, specifier and contractors.

More from CIKO Middle East

A wide range of construction chemical products are manufactured by CIKO Middle East which includes:

- Concrete admixtures and additives
- Waterproofing and damp-proof coatings
- Surface treatments
- Flooring and toppings
- Grouts and anchors
- Tile adhesives and grout
- Concrete repair materials
- Adhesives and bonding agent
- Protective coating
- Joint Sealants and Moulding compounds
- Ancillaries

Legal Notice and Warranty

CIKO warrants this product to be free from manufacturing defects and to meet the technical properties stated in the current Technical Data Sheet, if used as directed within its shelf life. Satisfactory results depend not only on quality of product but also on many factors beyond our control. CIKO makes no other warranty or guarantee, express or implied, including warranties of merchantability or fitness for a particular purpose with respect to its product. The sole and exclusive remedy of purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is the replacement of product or refund of the purchase price, at the sole option of CIKO. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by purchaser. CIKO will not be responsible for any special incidental, consequential including lost profits or punitive damages of any kind. Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on CIKO's present knowledge and experience. However, CIKO assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. CIKO reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

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All CIKO products are manufactured under a strict management system conforming to and in compliance with requirements of international standards of Quality, Environmental, occupational Health and Safety ISO 9001, ISO14001 and ISO45001.



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