Ciba® MAGNAFLOC LT425

Cationic coagulant

Description

MAGNAFLOC LT425 is a liquid grade polyelectrolyte of high cationic charge and low-medium molecular weight. The product is supplied as a mobile liquid and is easily diluted with water to provide solutions for plant use.

This product is approved by the United States Environmental Protection Agency and the Australian NHMRC for potable water application. The maximum approved dosage is 25 mg/litre. ***MAGNAFLOC*** LT425 meets the American Standard ANSI/NSF 60 and conformation to this is standard is certified by NSF International.

Principal Uses

The main area of use for ***MAGNAFLOC*** LT425 is as a primary coagulant for water clarification. When used in such situations the product can reduce and, in some cases eliminate , the prior addition of inorganic coagulants such as aluminium sulphate, ferric sulphate etc.

The chemical nature of ***MAGNAFLOC*** LT425 makes it effective for flocculation through a wide range of pH and confers stability to degradation by chlorine.

Solution Preparation and Application

For laboratory use solutions should be prepared at a concentration of 0.25 - 0.5% active polymer by the addition of water to the required weight of product. Mixing of water and polyelectrolyte is easily and quickly accomplished by mechanical agitation or by simply mixing within an enclosed bottle. For addition to the test water the above concentration may be maintained although, in many cases, further dilution with water to 0.05% concentration will be advantageous.

On plant scale, a concentration of 0.25 - 0.5% active polymer is recommended for addition to the system. This is readily obtained by either batch mixing with water in a stirred tank or alternatively by metering the concentrated product directly to the system and diluting in- line. In the latter case, a metering pump of the positive displacement type and with adequate corrosion-resistance characteristics is recommended.

For optimum results, ***MAGNAFLOC*** LT425 should be added to the system at a point of sufficient turbulence to ensure good initial dispersion and adequate mixing. This point will be prior to the clarifier or filters and ideally, the turbulent flow zone at the addition point should be followed by a quiescent zone.

In situations where an adequate addition point does not exist, turbulence may be induced by introducing an in-line mixer or a baffled zone etc.

Dosage Requirements

Dosage requirement of ***MAGNAFLOC*** LT425 will be dependent on the nature of the water to be treated and whether any inorganic coagulant is used.

For most applications the anticipated dosage will be in the range of 1-10 mg/litre.

Typical Properties

Nature	Aqueous solution of cationic homopolymer
Appearance	Clear viscous liquid
Activity	approx. 40%
pH as supplied	approx. 6
Viscosity @ 25°C	approx. 2000 cP
Specific gravity, 25°C	1.09

Storage and Stability	Undiluted ***MAGNAFLOC*** LT425 exhibits good stability characteristics after storage for 6 months at 40°C. Under normal storage conditions within the range 5 - 25°C, the product will be stable for at least 24 months. Storage outside the above specified temperature range for long periods may adversely affect the product and should thus be avoided, if possible. It is recommended that stock solution at 0.25 - 0.5% are prepared regularly and for maximum effect such solution should be used within 5 days. Beyond this period some loss in efficiency of the product may occur.
Benefits of MAGNAFLOC® LT425	The major benefits resulting from the use of ***MAGNAFLOC*** LT425 are likely to be:- ➢ Reduction or elimination of inorganic primary coagulants. ➢ Reduction in sludge volumes produced in the system. ➢ Decrease in pH sensitivity of coagulation/flocculation process. Further benefits may result in the form of reduced labour costs due to the ease of handling, storage and dosing of ***MAGNAFLOC*** LT425.
Technical Service	Advice and assistance in all aspects of product selection, laboratory tests, plant trials, etc can be provided by representatives of Ciba Specialty Chemicals experienced in the application of these products.
Packaging	Standard packaging for ***MAGNAFLOC*** LT425 are 200 kg nett weight plastic drums or 1080 kg nett containers. ***MAGNAFLOC*** LT425 may also be supplied in bulk by tanker delivery.
Corrosive Properties	***MAGNAFLOC*** LT425 is mildly corrosive. Use of mild steel, cast iron, aluminium and zinc surfaces in material of construction should be avoided. Recommended materials for storage tanks, dilution tanks etc., include: stainless steel, fibre glass, polyethylene and polypropylene.
Environmental Information	Cationic polyelectrolytes are toxic to fish due to their tendency to adsorb at the gill causing suffocation. Therefore unused or waste polyelectrolyte should not be discharged or allowed to spill into watercourses but should be disposed of in accordance with appropriate environmental regulations. However, it should be stressed that under normal operating conditions, cationic polyelectrolytes are rendered harmless by adsorption onto suspended and colloidal matter, and only if present in excess, eg. as a result of a spill, are they likely to have adverse effects.
Health and Safety	Detailed information on handling and any precautions to be observed in the use of the product(s) described in this leaflet can be found in our relevant Health and Safety information sheet.
Warranty	The information contained in this leaflet is given in good faith but no liability is assumed nor is freedom from any patent owned by Ciba Specialty Chemicals or others implied. This information should not be taken to represent a specification for the product.

PO Box 482
Wyong NSW 2259
Australia
Tel: (02) 4350 3200 Fax: (02) 4353 2136
Freecall: 1800 803 326
Freefax: 1800 814 892