PRODUCT TECHNICAL DATA

Macronutrient Crystallization Inhibitor CI-40

Product Description

CI-40 is a functional additive designed for liquid water-soluble fertilizers and concentrated macronutrient fertilizers. Its primary function is to prevent and resolve crystallization and precipitation under low-temperature or high-concentration conditions, maintaining the stability and uniformity of the fertilizer solution and supporting full expression of fertilizer efficacy.

Mechanism of Action

Through a specific chemical action, the product increases the solubility of inorganic salt components in solution and inhibits crystal formation and growth. The fertilizer therefore remains in a uniform liquid state after cooling or standing, helping to avoid nutrient loss.

Typical Properties

Property	Typical value
Appearance	Colorless to pale-yellow clear liquid
Active content	Approximately 40%
pH	7.0 ± 1
Viscosity (25°C)	40-600 mPa.s

Scope of Application

CI-40 is suitable for liquid water-soluble fertilizers that may be subject to crystallization, including high-nitrogen, high-phosphorus, high-potassium and balanced macronutrient liquid fertilizers based on raw materials such as urea, monopotassium phosphate, potassium sulfate and potassium nitrate. It is described as harmless to soil and crops, readily biodegradable and free from heavy metals. It can be used in acidic, neutral and alkaline fertilizer systems.

Method of Use and Dosage

- Addition stage: preferably add late in the fertilizer production process, after the fertilizer solution has cooled and before filling.
- Addition level: 0.5%-2% of the total liquid-fertilizer weight. Adjust the dosage according to the fertilizer formula, concentration, storage conditions and intended use.
- Addition method: add the calculated amount to the fertilizer solution and mix thoroughly.

Packaging, Storage and Shelf Life

Packaging: 30 kg and 50 kg plastic drums. Shelf life: 12 months from the date of manufacture when stored in the unopened original container at 5-40°C.