



CROP SOLUTIONS

SURFOM[®] CE 8434

GHS FRIENDLY SOLVENT





EMULSIFIABLE CONCENTRATE

In agricultural
applications



CROP SOLUTIONS

GHS FRIENDLY
SOLVENT

Emulsifiable Concentrate formulations accounts for 25% of all Crop Protection Market Value and it's the most relevant formulation in terms of Market Volume accounting for 31% of Global Market. EC's plays an important role in Asian Pacific and North American Markets, representing 33% and 46% respectively, in terms of volume.

ECs is one of the most common formulation for Crop Protection Products. Before getting diluted with water in the spray tank, this formulation generally encompasses the AI (liquid or dissolved in a solvent) combined with the right emulsifier.

Oxiteno has a good portfolio of Solvents and Emulsifiers that are compatibles within a wide range of Active Ingredients, which supports our customers to explore the full potential of EC formulations in agrochemical applications.



OXITENO



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APPLICATIONS

GHS FRIENDLY SOLVENT FOR LIQUID FORMULATIONS

EC formulations are usually simple to manufacture. Presenting a spontaneous emulsification when diluted in the spray tank, these formulation requires the right selection of emulsifier and solvent for different Active Ingredients.

SURFOM® CE 8434 is a Capric/Caprylic Methyl Esther based solvent with improved GHS profile and low Phytotoxicity that dilutes a wide range of Herbicides, Insecticides and Fungicides, Emulsiable and compatible for EC, SE and EW formulations.



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GHS FRIENDLY SOLVENT FOR
LIQUID FORMULATIONS



Sustainability – Friendly solvent with good GHS profile and lower phytotoxicity when compared to benchmarks



Versatility – Emulsiable solvent with good compatibility for EC, SE and EW formulations



Efficiency – Good solubility of a wide spectrum of AI's, addressing the classes of Herbicides, Fungicides and Insecticides

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	BENCHMARK #1 Caprylic Methyl Ester	BENCHMARK #2 N-Methyl-Pyrrolidone	BENCHMARK #3 C8-C10 Amides	BENCHMARK #4 Aromatic Solvent	SURFOM® CE 8434 Good GHS Profile when compared to benchmarks
STOT SE 3		X		X	
SKIN IRRITATION				X	
ORAL IRRITATION		X	X		
DERMAL IRRITATION			X		
OCULAR IRRITATION			X		
REPRODUCTION					
ACUTE ENVIRONMENT	X		X		
INHALATION				X	
REPRODUCTION		X			
SUCTION				X	
FLAMMABLE	X	X		X	X
CHRONIC ENVIRONMENT				X	

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CROP SOLUTIONS

AFTER
1H

AFTER
4H

AFTER
24H

WITHOUT
SOLVENT



N,N-
DIMETHYLDE
CANAMIDE



SURFOM® CE
8434



Lower Phytotoxicity in
Poinsettia tests
(*Euphorbia pulcherrima*)

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CROP SOLUTIONS

LOAD OF SOLUBILITY (g/L) TESTS RESULTS



INSECTICIDES

ABAMECTIN	50.0	Completely Solubilized
CHLORANTANILIPROLE	87.5	Completely Solubilized
CYPERMETRIN	250.0	Completely Solubilized



HERBICIDES

MESOTRIONE	112.5	Completely Solubilized
SAFLUFENACIL	175.0	Completely Solubilized
TEMBOTRIONE	105.0	Completely Solubilized
HALOXYFOP	106.0	Completely Solubilized



FUNGICIDES

PROPICONAZOLE	100.0	Completely Solubilized
FLUAZINAN	125.0	Completely Solubilized



Good solubility of a wide spectrum of Active Ingredients

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Good stability
results **after 14
days** in this range of
temperature without
crystals formation



CYPERMETRIN 250EC #1 SUGGESTIVE FORMULATION

	Concentration g/L
Active ingredient	250
SURFOM® CE 8056 (Emulsifier)	100
SURFOM® CE 8434 (Solvent)	QSP

STABILITY AFTER 14 DAYS	0°C	25°C	54°C
Appearance	Yellowish clear liquid	Yellowish clear liquid	Yellowish clear liquid
pH 5% in water	6.5	6.4	6.2

SURFOM® CE 8434



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CYPERMETRIN 250EC #1 SUGGESTIVE FORMULATION

	Concentration g/L
Active ingredient	250
SURFOM® CE 8056 (Emulsifier)	100
SURFOM® CE 8434 (Solvent)	QSP



Good emulsion results after
24h with **different ranges of
water hardness**



1% IN 20PPM
water hardness
after 24h



5% IN 342PPM
water hardness
after 24h



5% in 1000ppm
water hardness
after 24h

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GHS FRIENDLY SOLVENT FOR LIQUID FORMULATIONS



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CHEMICAL DESCRIPTION

Capric/Caprilic methyl ester (C8/C10)

- Appearance (25°C) : Clear Liquid
- Solubility in water (10%) – Insoluble
- Density at 25°C (g/cm³) : 0,880
- Viscosity at 25°C (cP): About 3 cP
- Flash Point (°C) : Approx. 81
- Pour Point (°C) : Approx. -28
- Saponification value (mgKOH/g) : Approx. 327



When developing Emulsifiable Concentrate formulations it's important to choose the right package of emulsifier and solvent, in order to maintain the stability of the formulation and create the spontaneous emulification when diluted in the spray tank. **SURFOM® CE 8434** is a GHS friendly solvent with low phytotoxicity capable of solubilizing a wide range of Active Ingredients.

