

# SURFOM® CE 8434 GHS FRIENDLY SOLVENT









## EMULSIFIABLE CONCENTRATE

In agricultural applications

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 dilluted with water in the spray tank, this formulation generally encompasses the AI (liquid or dissolved in a solvente) 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.







**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.



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 Al's, addressing the classes of Herbicides, Fungicides and Insecticides

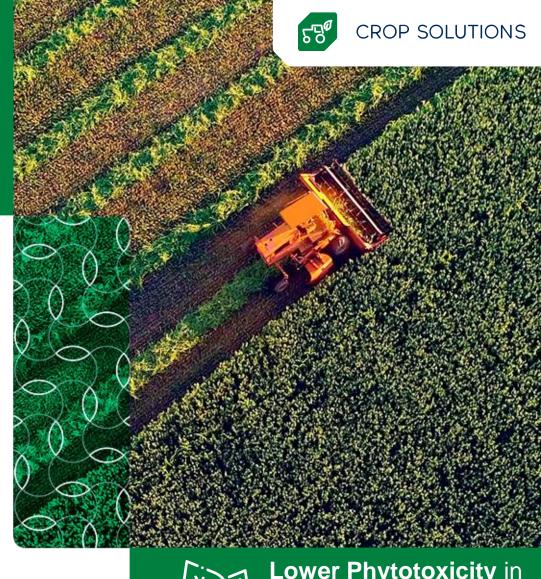






	BENCHMARK #1 Caprylic Methyl Ester	BENCHMARK #2 N-Methyl-Pyrrolidone	BENCHMARK #3 C8-C10 Amides	BENCHMARK #4 Aromatic Solvent	SURFOM® CE 8434  Good GHS Profile when compared to benchmarks
STOT SE 3		X		X	
SKIN IRRITATION				X	
ORAL IRRITATION		X	X		
DERMAL IRRITATION			X		
OCULAR IRRITATION			X		
REPRODUCTION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

**AFTER AFTER AFTER 4H 24H WITHOUT SOLVENT** N,N-**DIMETHYLDE CANAMIDE SURFOM® CE** 8434





Lower Phytotoxicity in Poinsettia tests (Euphorbia pulcherrima)





LOAD OF SOLUBILITY (g/L)	TESTS <b>RESULTS</b>
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356		LOAD OI	OOLOBILIT	· (g/L)	TEOTO REGULTO
孤	INSECTICIDE	ES			
	ABAMECTIN		50.0		Completely Solubilized
CHLORA	ANTANILIPROLE		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	1	106.0	<u> </u>	Completely Solubilized
WWW.	FUNGICIDES	S			
PF	ROPICONAZOLE		100.0		Completely Solubilized
	FLUAZINAN		125.0		Completely Solubilized



Good solubility of a wide spectrum of Active Ingredients







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







1% IN 20PPM water hardness after 24h



5% IN 342PPM water hardness after 24h



5% in 1000ppm water hardness after 24h

#### **CYPERMETRIN 250EC #1 SUGGESTIVE FORMULATION**

Concentration g/L 250

Active ingredient 100

SURFOM® CE 8056 (Emulsifier)

**SURFOM® CE 8434 (Solvent) QSP** 



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



#### CROP SOLUTIONS GHS FRIENDLY SOLVENT

#### GHS FRIENDLY SOLVENT FOR LIQUID FORMULATIONS



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



## 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







