SURFOM® CE 8434

THE PERFECT MATCH BETWEEN PERFOMANCE AND SUSTAINABILITY

Contribute to the well-being of people through chemistry

Oxiteno believes it is possible to balance economic prosperity, protection of the environment and serving the needs of society. With this committment, Oxiteno's Strategic Sustainability Plan 2030 aims to contribute to the well-being of people involved in chemistry. There are many challenges in this journey and Oxiteno is sure that today's decisions can help to build a more sustainable future.

The Sustainability Plan for 2030 connects the Sustainable Development Goals (SDGs), established by UN, with specific goals for each of the 8 pillars: Economic, Environment, Safety, Product Safety, Workforce Valuation, Product Portfolio, Supply Chain and Ethics, Transparency and Integrity.

The quintessential result for difficult demands

The crop protection industry formulators faces challenges to meet increasing demands from societal awareness, sustainability and the impacts of technology to this market summed up to the need for increased efficacy of the formulations and productivity to address the population growth.

To resolve these issues with good solubility performance, versatility of formulations, meeting safety requirements and without harming the plantations and their growth, we bring SURFOM® CE 8434 solvent as a tool for the formulators. SURFOM® CE 8434 fulfills the sustainability requirements since it's produced by a renewable source and our productive plants are certified by the RSPO (Roundtable on Sustainable Palm Oil).

Capric/Caprilic Methyl Ester

- **Appearance (25ºC)**: Clear Liquid
- **Solubility in water (10%)** – Insoluble
- **Density at 25ºC (g/cm³)**: 0,880
- **Viscosity at 25ºC (cP)**: About 15cP
- **Flash Point (ºC)**: Approx. 81
- **Pour Point (ºC)**: Approx. -28
- **Saponification value (mgKOH/g)**: Approx. 327
- **Hansen Parameters**: dD: 15.8 dP: 2.9 dH: 5.5

Click here to access the Strategic Sustainability Plan 2030

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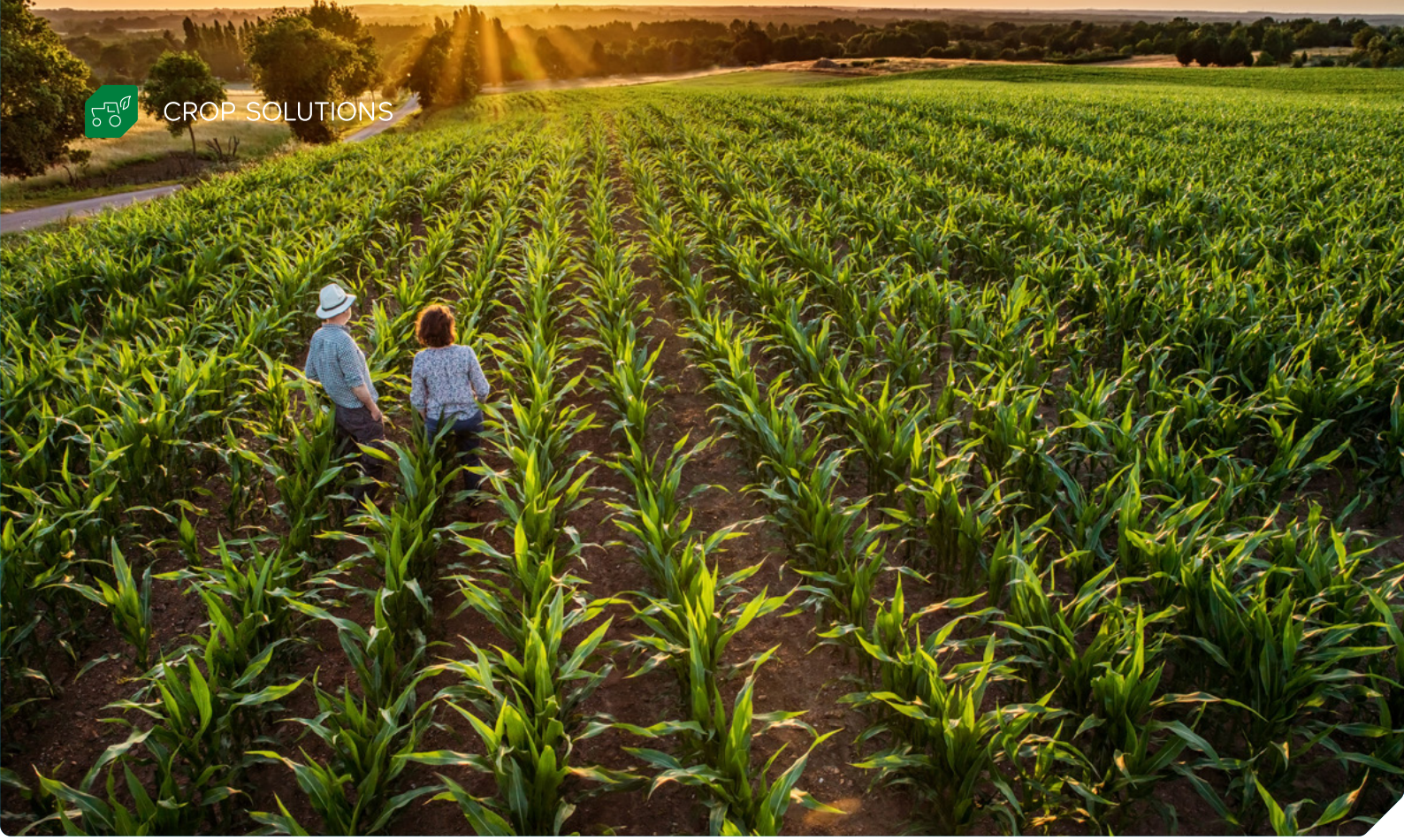
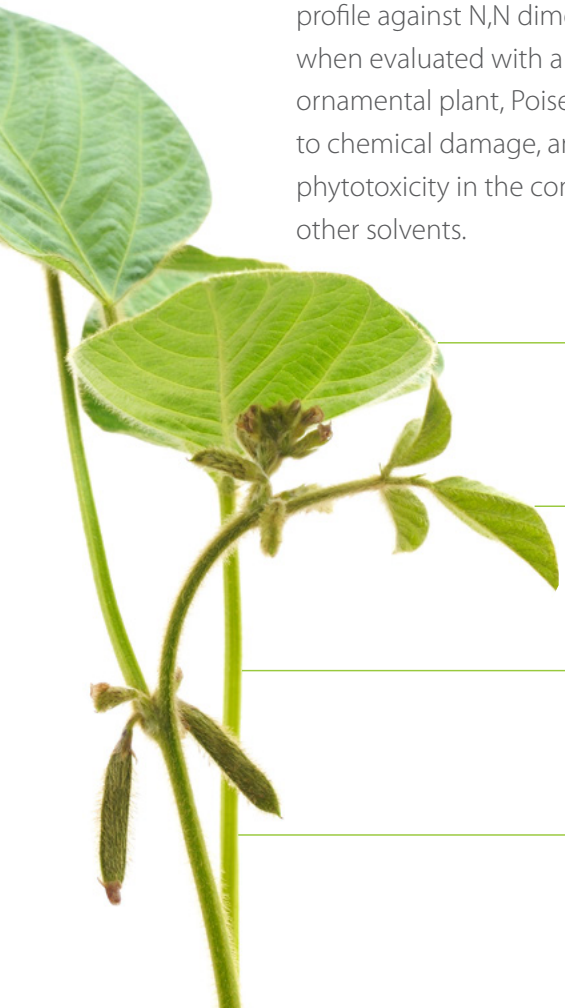
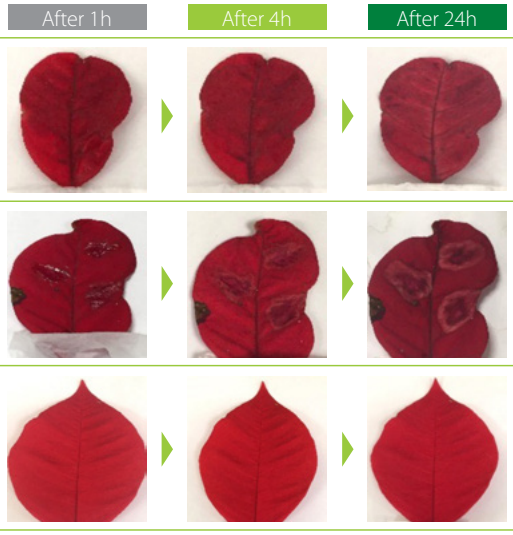


Better phytotoxicity profile and spreadability

SURFOM® CE 8434 has shown an excellent profile against N,N dimethyldecanamide when evaluated with a very sensitive ornamental plant, Poisenttia (*E. pulcherrima*) to chemical damage, and shows slight phytotoxicity in the comparison with other solvents.

In regulatory terms, SURFOM® CE 8434 presents a good GHS profile. Solvents in general present several pictograms in its label: skin, oral, dermal, ocular irritation and acute environment. While SURFOM® CE 8434 dos not present any of those. Here, we have the N,N-Dimethyldecanamide as a example of phytotoxicity in the leaf, and the good spreadability of SURFOM® CE 8434 without any leaf damage.





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Application Cases of SURFOM® CE 8434

Broad Pesticide Solubility Spectrum

SURFOM® CE 8434 presents good solubility profile for multiple Active Ingredients with different dosages, varying from Fungicides to Herbicides

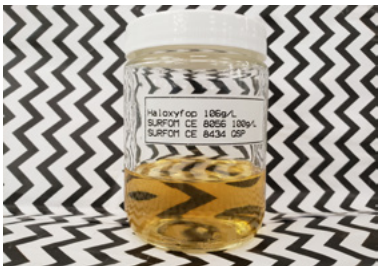
Emulsiable Concentrate (EC)

Emulsifiable Concentrate (EC) 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.

Looking for the technical point of the EC formulations efficacy is due the pesticide solubilized form. It represents an increase in the active surface area, this increase allows the process of translocation and transport through the metabolic pathways effectively. Even with chances of success in using this type of formulation many formulators face difficulties during the formulation development not to compromise formulation load and sustainability.

SURFOM® CE 8434 is a versatile solvent that can be used in several types of formulations, presenting good stability results; from the well-established Emulsifiable Concentrate (EC) to sophisticated formulations such as Emulsion in Water (EW) or Suspoemulsion (SE) formulations. The following examples are suggestive formulations with SURFOM® CE 8434 that presents good stability results.

SURFOM® CE 8056 is an emulsifier system comprising the concept sustainability granting the strategy to not use harmful or toxic substances in new formulations. SURFOM® CE 8434 is easily emulsifiable applying traditional anionic and nonionic surfactants, or combination of them, in the market.

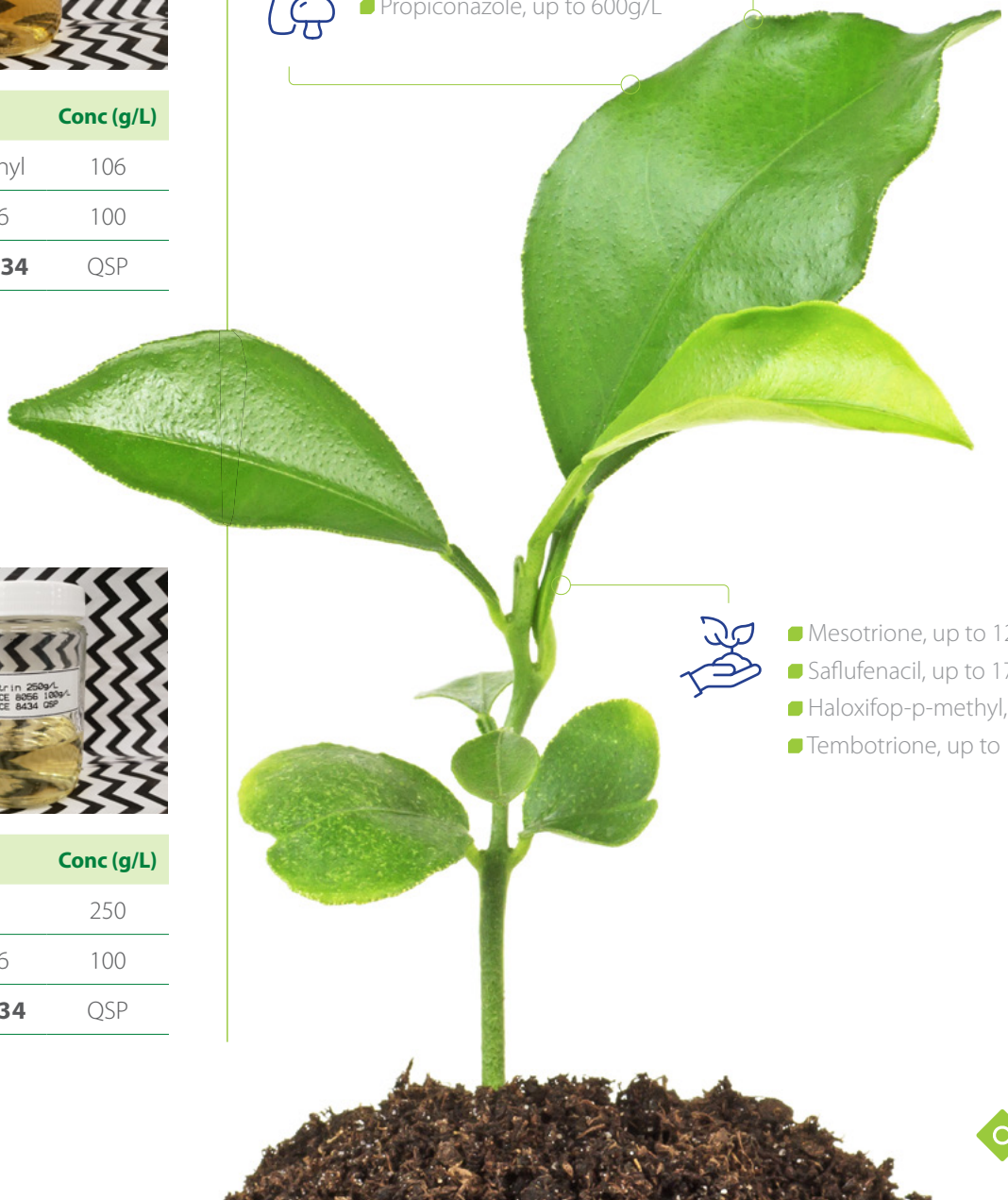


Compounds	Conc (g/L)
Haloxyfop-p-methyl	106
SURFOM® CE 8056	100
SURFOM® CE 8434	QSP

Compounds	Conc (g/L)
Cypermetrin	250
SURFOM® CE 8056	100
SURFOM® CE 8434	QSP

- Abamectin, up to 50g/L
- Chlorantaniliprole, up to 80g/L
- Cypermetrin, up to 250g/L
- Indoxacarb, up to 150g/L

- Fluazinam, up to120g/L
- Propiconazole, up to 600g/L



- Mesotrione, up to 120g/L
- Saflufenacil, up to 170g/L
- Haloxifop-p-methyl, up to 480g/L
- Tembotrione, up to 100g/L

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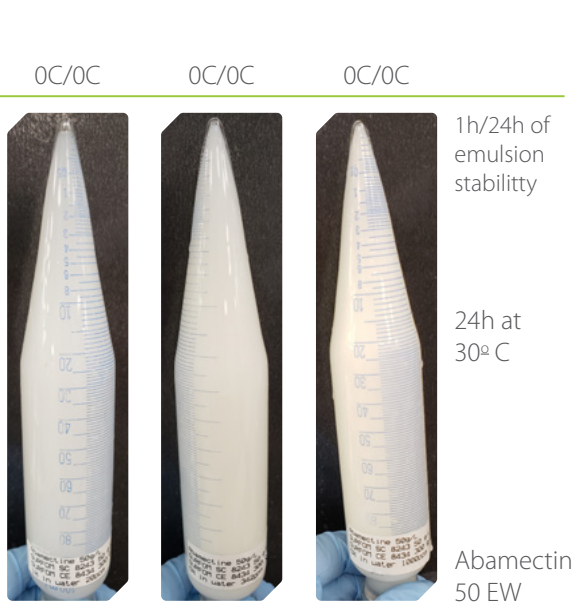
Emulsion in Water (EW)

These formulations are known as low toxicity in terms of dermal or harming to the environment due their ability to keep the pesticide in an emulsion system. The solvent role is import in order to maintain the pesticide in a solubilized form and avoid the crystal growth. The phosphate ester surfactant SURFOM® SC 8243 was the emulsifier of choice as provides good emulsion stability under different hardness of water and product shelf-life.

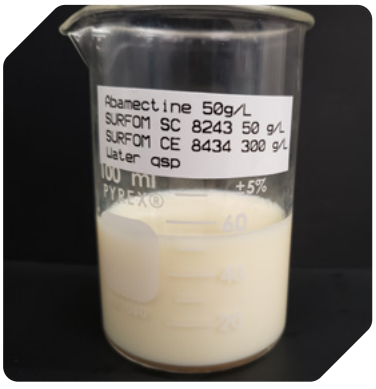


Compounds	Conc (g/L)
Abamectin	50
SURFOM® SC 8243	50
Propylene Glycol	5
Xanthan Gum	qs
Antifoam	qs
Preservative	qs
Water	qs
SURFOM® CE 8434	300

Easy to emulsify SURFOM® CE 8434

Emulsifier examples:

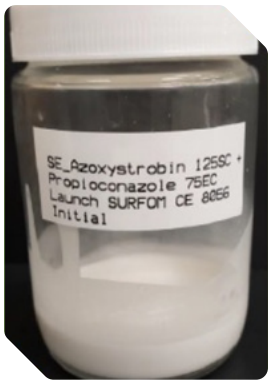
- Castor oil Ethoxilated (SURFOM® R @ line)
- Block Copolymers (ULTRARIC® HM 50)
- Alkyl Benzene Sulphonate Calcium Salt (SURFOM® CE 1287 | SURFOM® 2115)
- Alkyl Phosphate Esters Line



Suspoemulsion (SE) formulations

For Suspoemulsion formulations, SURFOM® CE 8434 was used to formulate a fungicide mixture of Azoxystrobin 125 g/L and Propiconazole 75 g/L.

This type of formulation helps the formulators to sort out the increasing challenges of mixing actives with different solubility profiles to manage increasing weed or fungicide resistance, it is possible to combine pesticides even though they have different solubility profile. This mixture options provides a higher activity spectrum and maximized the application process in the field by eliminating the tank mix incompatibilities. In this formulation we have an insoluble solid active ingredient in the suspension phase with water as a solvent, a pesticide solubilized in a water insoluble solvent and the surfactants acting to keep the active suspended and emulsifying the insoluble solvent in water in order to keep the solubilized pesticide into the oil droplets.



Phase A

Compounds	Conc (g/L)
Propiconazole	680
SURFOM® CE 8056	100
SURFOM® CE 8434	QSP

Phase B

Compounds	Conc (g/L)
Azoxystrobin	250
Ethylene Glycol	50
SURFOM® SC 8895	50
Antifoam	qs
Preservative	qs
Water	qs

SE

Compounds	Conc (g/L)
Phase A	110
Phase B	500
Propylene Glycol	50
Xanthan Gum	qs
Water	qs

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If you are looking for an outstanding GHS profile for a solvent SURFOM CE® 8434 is what you need!

Contact us and request a sample.

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