



CROP SOLUTIONS

SURFOM[®] CE 8056

VERSATILE EMULSIFIER PACKAGE





EMULSIFIER PACKAGE

In agricultural
applications



CROP SOLUTIONS

VERSATILE
EMULSIFIER
PACKAGE

SURFOM CE 8056 is as an Emulsifier Package that might be use in several types of formulations: Emulsiable Concentrate (EC), Suspo-Emulsion (SE), Emulsion in Water (EW), Oil Dispersion (OD) and also as Adjuvants

Considering EC as the most relevant formulation from the listed above, it accounts for 25% of all Crop Protection Market value and 31% of the volume applied. The consumption of ECs is led by NAFTA where the applications accounts for 46% of Regional Crop Protection Market. In Asia Pacific, Rice Sector plays an important role in ECs consumption due to herbicides applications.

SURFOM CE 8056 is compatible with Ester Based Solvents, which is also part of Oxiteno's Portfolio



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EMULSIFIER
PACKAGE

SURFOM[®] CE 8056

EMULSIFIER PACKAGE OF BLOCK COPOLYMER
EO/PO, ANIONIC SURFACTANT AND CASTOR OIL
ETHOXYLATED



Sustainability – Good Phytotoxicity profile
and compatible with Biopesticides



Versatility – Good performance results in
multiple formulations: EC, EW, SE and OD



Regulatory - EPA approved in inerts list and
all components listed in IESC China



Compatibility – Emulsifier Package for Fatty
Acid Ester Based Solvents, NPE free



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SURFOM[®] CE 8056

APPLICATIONS

EMULSIFIER PACKAGE FOR ESTER BASED SOLVENTS

- SURFOM CE 8056 might be use in several types of formulations with the following General Dosages:
- Emulsiable Concentrate (EC) – 5 to 15%
- Suspo-Emulsion (SE) – 1 to 5%
- Emulsion in Water (EW) – 20 to 40%
- Oil Dispersion (OD) – 5 to 15%
- Adjuvants – 5 to 15%

SURFOM® CE 8056

EMULSIFIER PACKAGE FOR ESTER BASED SOLVENTS



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CLOMAZONE 500 EC

#1 SUGGESTIVE
FORMULATION

Concentration
g/L

Active ingredient (Herbicide)

500

SURFOM® CE 8056 (Emulsifier)

100

SURFOM® CE 8434 (Solvent)

QSP



Good Emulsion Profile after 24h at 30°C of Stability Tests in Different Range of Hardness Water

EMULSION TEST

1h/24h

0C/0C

0C/0C

0C/0C



1% in
20ppm
hardness
water after
24h



5% in
342ppm
hardness
water after
24h



5% in
1000ppm
hardness
water after
24h

SURFOM® CE 8056

EMULSIFIER PACKAGE FOR ESTER BASED SOLVENTS



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CYPERMETRIN 250 EC

#2 SUGGESTIVE
FORMULATION

Concentration
g/L

Active ingredient (Insecticide) 250

SURFOM® CE 8056 (Emulsifier) 100

SURFOM® CE 8434 (Solvent) QSP



Good Emulsion Profile after 24h at
30°C of Stability Tests in Different
Range of Hardness Water

EMULSION TEST

1h/24h

0C/0C

0C/0C

0C/0C



1% in
20ppm
hardness
water after
24h



5% in
342ppm
hardness
water after
24h



5% in
1000ppm
hardness
water after
24h

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EMULSIFIER PACKAGE FOR ESTER BASED SOLVENTS



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AZOXYSTROBIN 125 + PROPIOCONAZOLE 75 SE

#3 SUGGESTIVE
FORMULATION

% w/w

Phase A	11.03
Phase B	50.00
Propylene Glycol	5.00
Xanthan Gum, 2% slt	4.62
Water	29.35

PHASE A

% w/w

SURFOM® CE 8434 (Solvent)	22.0
Active Ingredient (Propioconazole)	68.0
SURFOM® CE 8056 (Emulsifier)	10.0

PHASE B

SURFOM® SC 8895 (Dispersant)	5.00
Active Ingredient (Azoxystrobin)	21.19
Ethylene Glycol (Anti Freezing)	5.00
Antifoam	0.18
Preservative	0.10
Water	66.53

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EMULSIFIER PACKAGE FOR ESTER BASED SOLVENTS



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AZOXYSTROBIN 125 + PROPIOCONAZOLE 75 SE

% w/w

#4 SUGGESTIVE
FORMULATION

Phase A	11.03
Phase B	50.00
Propylene Glycol	5.00
Xanthan Gum, 2% slt	4.62
Water	29.35



Formulation stability with good
rheology profile and narrow
particle size distribution

EMULSION TEST

1h/24h

0C/0.8C

0C/2C

0C/4C



1% in
20ppm
hardness
water after
1h



5% in
342ppm
hardness
water after
1h



5% in
1000ppm
hardness
water after
h

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EMULSIFIER PACKAGE FOR ESTER BASED SOLVENTS



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ESSENTIAL OILS EW

#5 SUGGESTIVE
FORMULATION

% w/w

PHASE A

Essential Oil (Pesticide) 6.0

SURFOM® EMS 2000 (Solvent) 11.0

PHASE B

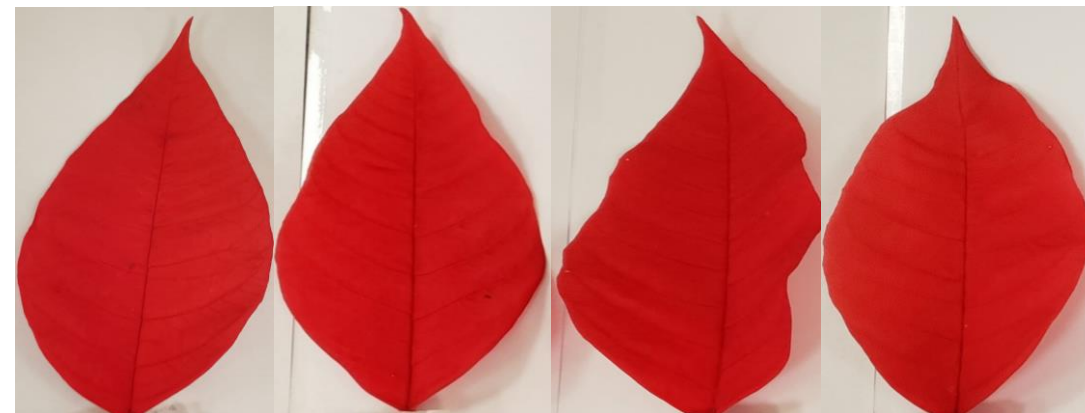
SURFOM® CE 8056 (Emulsifier) 21.0

Antifoam 0.1

Water QSP

PHYTOTOXICITY TEST

After 24h



Without
Formulation

D-Limonene

Orange Oil

Citronella

Analysis Conditions – Temperature 25 ± 1 °C with formulation diluted as 1% in 20ppm of hardness water



**Good compatibility with
Biopesticides at low dosages**



**No phytotoxicity after 24h when
applied with Essential Oils**

SURFOM® CE 8056

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EMULSION TEST

1h/24h

0.2C/0.8C

0.5C/2.8C

0.25C/2.8C



1% in 20ppm
hardness water
after 1h at 30°C



5% in 342ppm
hardness water
after 1h at 30°C



5% in 1000ppm
hardness water
after 1h at 30°C



Formulation stability with good
rheology profile and narrow particle
size distribution

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CHEMICAL DESCRIPTION

**BLOCK COPOLYMER EO/PO, ANIONIC
SURFACTANT AND CASTOR OIL
ETHOXYLATED**

- Appearance (25°C) : Viscous Liquid
- Solubility in water (10%) – Partially Soluble
- Density (25°C) : 1.032 g/cm³
- Surface Tension (0,5% - 20°C) : (30.98 ± 0.03) mN/m
- Viscosity (25°C) : approx. 1700 cP
- Flash Point: 41.5°C
- Pour Point: approx. 8°C
- HLB Calculated: 11.3

SURFOM CE 8056 is as an Emulsifier Package, NPE free, that might be use in several types of formulations: Emulsiable Concentrate (EC), Suspo-Emulsion (SE), Emulsion in Water (EW), Oil Dispersion (OD) and also as Tank Mix Adjuvants with good Drift-Reduction properties.

When used with Ester based solvents, the final formulation has presented good stability results with and emulsion profile.

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CHEMICAL DESCRIPTION

BLOCK COPOLYMER EO/PO, ANIONIC
SURFACTANT AND CASTOR OIL
ETHOXYLATED

Quality Requirement

Commercial Specification

	Min	Max
Acid number, mg KOH	40.0	50.0
pH, 1% w/w, ISO in water 4:1 w/w 25°C	5.0	8.0
Appearance, 25°C	Liquid yellowish	
Moisture, wt%	0.0	1.0

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