

# Arm<sup>®</sup>id FMPC

## the effective co-solvent

### Technical bulletin

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# AkzoNobel

Tomorrow's Answers Today

**A powerful optimized solvent blend for EC formulations. Additions of Armid FMPC will increase the solubility of the active ingredient, avoid crystallization at low temperature and upon dilution.**

#### EC crystallization problems?

- Armid FMPC is AkzoNobel's new co-solvent for emulsifiable concentrate (EC) formulations
- Replaces N-Methylpyrrolidone as crystal inhibitor in EC recipes
- Excellent water solubility; miscible with typical aromatics, glycols & lower alcohols

#### Why use Armid FMPC as co-solvent?

- Cost effective; good environmental profile
- Based on a morpholine derivative
- TSCA and DSL listed. This product contains only ingredients that have been subject to a pre-registration according to EU regulation No 1907/2006 (REACH). Not US-EPA listed.

#### Armid FMPC: Environmental profile\*

Acute oral toxicity (rat)	LD50 >5000 mg/kg
Acute dermal toxicity (rabbit)	LD50 >2000 mg/kg
Toxicity to fish	LC50 >500 mg/l Exposure time: 96 h Species: Leuciscus idus (Golden orfe)
Toxicity to daphnia	EC50 >500 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea)
Toxicity to algae	EC50 >100 mg/l Exposure time: 72 h Species: Algae
Biodegradability	>70% DOC, 28 days Readily biodegradable
PBT and vPvB assessment	This substance is not considered to be a PBT (Persistent, Bioaccumulation, Toxic). This substance is not considered to be vPvB (very Persistent nor very Bioaccumulating)

\* literature data



Crystals that clog your nozzles during spraying is a common problem.

#### Solubility data

Solvent	5% Armid FMPC at 25°C
Water	miscible
Propylene glycol	miscible
1-Butanol	miscible
2-Ethyl hexanol	miscible
Dimethyl sulfoxide	miscible
Solvesso 150	miscible
Solvesso 200	miscible
Vegetable oil	miscible

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**Get samples of the Armid solvents and emulsifiers for your formulation tool box and learn more at:**  
[www.akzonobel.com/agriculture](http://www.akzonobel.com/agriculture)

## Application examples

Ingredient	Function	Concentration
Trifloxystrobin	fungicide	125 g/l
Witconate P1460 EH + Ethylan NS 500LQ + Ethylan 954 LQ	emulsifier blend	90 g/l
Armid FMPC	co-solvent	200 g/l
Armid DM 10	solvent	q.s. 1 liter

Ingredient	Function	Concentration
Quizalofop-P-ethyl	herbicide	250 g/l
Berol 9968 + Berol 9969	emulsifier blend	80 g/l
Armid FMPC	co-solvent	200 g/l
Solvesso 150 ND	solvent	q.s. 1 liter

Ingredient	Function	Concentration
Emamectin benzoate	insecticide	40 g/l
Berol 9927	emulsifier blend	100 g/l
Armid FMPC	co-solvent	350 g/l
Solvesso 200	solvent	q.s. 1 liter

Ingredient	Function	Concentration
Thiobencarb	herbicide	600 g/l
2,4-D IBE	herbicide	200 g/l
Sponto 300T + Sponto 500T	emulsifier blend	60 g/l
Armid FMPC	co-solvent	30 g/l
Solvesso 100	solvent	q.s. 1 liter

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