

Nouryon

Agrilan[®] 1028

Agricultural solutions

Agrilan 1028 dispersant is an optimized phosphate ester for high electrolyte systems. It facilitates the compatibility of pesticides in fertilizer solutions and in multi-active tank mixes. It allows the dilution of pesticide SCs into fertilizers and aids the mixing of multiple actives in tank mix formulations preventing flocculation and sedimentation.

Agrilan 1028 compatibilizer allows complex formulations with fertilizers

Key benefits

- Forms stable concentrated dispersions in fertilizers (SCs)
- Helps compatibility in spray tank with fertilizers and herbicides
- Good solubility in many solvents
- Good wetting properties and low foaming
- Can be used as tank-mix or in-can formulations

Regulatory

- TSCA and FIFRA listed
- Under REACH polymer definition
- Listed in China Chemical Inventory

Agrilan 1028 has an optimized structure

Agrilan 1028 has an optimized structure, which allows formulators to meet the window of good compatibility.

Similar phosphate esters were formulated with bifenthrin and evaluated for compatibility with 10-34-0 fertilizer. Test results indicate that only Agrilan 1028 was compatible.



Phosphate ester

SC stability 24 hrs

Stability in spray tank containing 10-34-0 fertilizer

1 hr

24 hrs

Phosphate ester	SC stability 24 hrs	Stability in spray tank containing 10-34-0 fertilizer 1 hr	Stability in spray tank containing 10-34-0 fertilizer 24 hrs
Agrilan 1028 C10 rich polyether phosphate	Fully compatible	Fully compatible	Fully compatible
Isodecyl polyether phosphate	Phase separation	Minor separation	Phase separation
2-propyl heptyl polyether phosphate	Phase separation	Fully compatible	Phase separation
C9-C11 polyether phosphate	Phase separation	Minor separation	Phase separation
Decyl polyether phosphate	Phase separation	Fully compatible	Fully compatible
Competitor 1 (C10 polyether phosphate)	Phase separation	Fully compatible	Phase separation
Competitor 2 (C10 polyether phosphate)	Phase separation	Phase separation	Phase separation

Formulation guide

The following recipes guide provides you with stable formulations that can be diluted into fertilizers such as NPK 10-34-0, 30% AMS or Thiosulphate fertilizer.

Imidacloprid SC

Imidacloprid	21.4%
Agrilan 1028	8%
Propylene glycol	5%
Kaolin clay	5%
Defoamer	0.3%
Xanthan gum	0.2%
Water	up to 100%

Bifenthrin SC

Bifenthrin (94.6%)	17.5%
Agrilan 1028	8%
Propylene glycol	5%
Defoamer	0.3%
Xanthan gum	0.05%
Water	up to 100%

Bifenthrin Fertilizer SC

Bifenthrin (94.6%)	33%
Agrilan 1028	2.5%
10-34-0 fertilizer	55%
Water	9.5%

Above recipes are meant for guideline purpose only. It might be necessary to add additional propylene glycol, biocides, defoamers etc.

Agrilan 1028 as tank mix compatibilizer

Compatibility for a 3-way SL/EC/WDG mix.

EC + WDG mix with 4 different SL	No Agrilan 1028	0.15% Agrilan 1028	0.5% Agrilan 1028
Atrazine, Trifluralin + K-Glyphosate 1	Flocculant, sediment	Compatible	Compatible
Atrazine, Trifluralin + K-Glyphosate 2	Flocculant, sediment	Flocculant, sediment	Compatible
Atrazine, Trifluralin + K-Glyphosate 3	Flocculant, sediment	Flocculant, sediment	Compatible
Atrazine, Trifluralin + K-Glyphosate 4	Flocculant, sediment	Compatible	Compatible

Procedure: Agrilan 1028 was added into the spray tank in different concentrations. Atrazine 900 WDG, Trifluralin EC 480 and K-Glyphosate 540 g/l from four different producers were added for compatibility evaluation.

Solubility in solvents

Solvent	5% Agrilan 1028
Armid DM10	partly soluble
Armid FMPC	soluble
Mineral oil	insoluble
n-Octanol	soluble
Propylene glycol	soluble
Rapeseed methyl ester	soluble
Vegetable rapeseed oil	insoluble
Solvesso 150 ND	soluble
White spirit (naptha)	soluble
Xylene	soluble
Water	dispersible

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