



Agrilan[®] 1084



An effective compatibilizer for
complex crop formulation
combinations

Nouryon

Agrilan[®] 1084

Agrilan[®] 1084 is a phosphate ester used as a compatibilizer for tank-mix applications. It facilitates the compatibility and allows the dilution of pesticide into fertilizers and aids the mixing of multiple actives in tank-mix formulations preventing flocculation and sedimentation.

Key benefits

- Clean solubility in water and many solvents
- Helps compatibility in spray tank with pesticides and fertilizers
- Good surface tension reduction and low CMC
- Good wetting properties and low foaming
- Can be used as tank-mix or in-can formulations

Regulatory

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

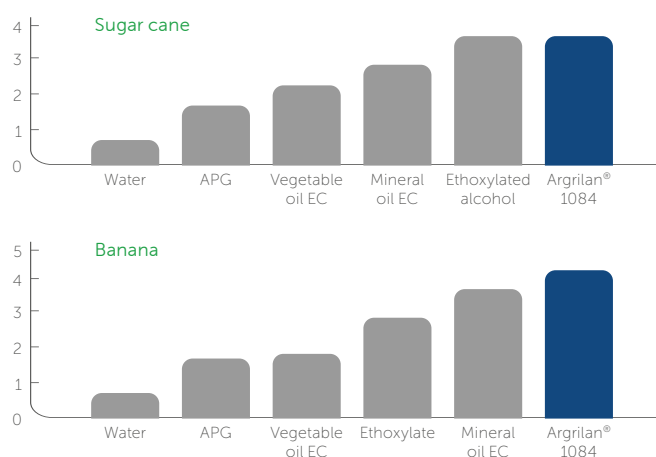
Agrilan[®] 1084 has an optimized structure

Agrilan[®] 1084 has proven to be an excellent adjuvant, with significant potential to improve compatibility in low-volume tank mixtures. It can improve the mix compatibility of widely used products such as Glyphosate and Mancozeb. Additionally, it offers other benefits in spraying, such as pH reduction, surface tension reduction, increased wettability and better spreadability.

Adjuvancy properties

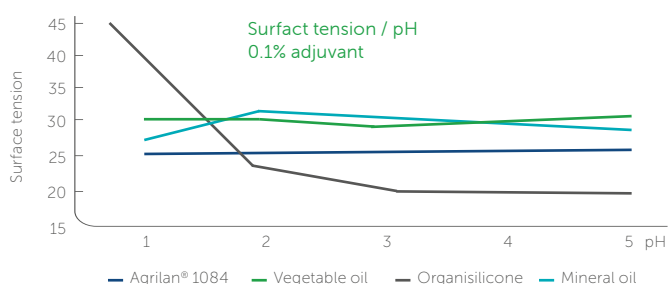
Spreadability

How much do droplets with 0.1% adjuvant spread compared to water?



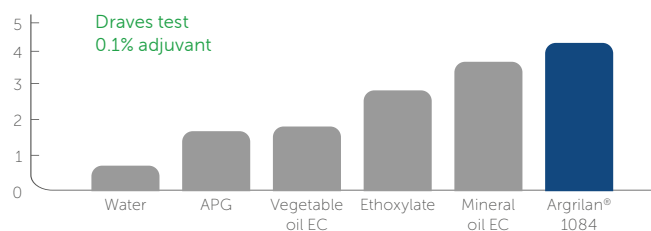
Surface tension

Tests were performed at different pHs. The surface tension of other adjuvants are sensible to pH, while Agrilan[®] 1084 was stable.

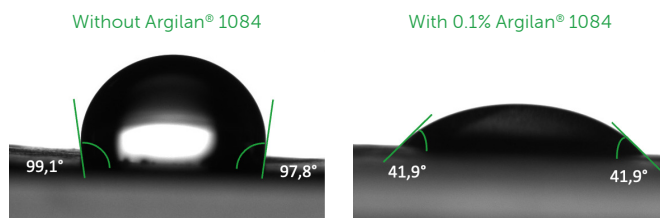


Wetting power

Wetting properties of different adjuvants according to Draves test. The time it takes for a standard cotton skein to sink to the bottom of a cylinder containing a solution of 1% adjuvant in distilled water is measured. The data shows Agrilan[®] 1084 as an excellent adjuvant for wetting properties.



Contact angle in cabbage



Evaluation of the physical-chemical compatibility of ultra low volume application

2.1 gal/acre

Mancozeb (WG) mix with different formulations in water 500 ppm	No Agrilan® 1084	1% Agrilan® 1084 after 1 hour
1. Mancozeb (WG); 2. Di-Glyphosate (SL)	Sediment, nozzle clogging	Compatible
1. Mancozeb (WG); 2. NPK; 3. Chlorothalonil (SC); 4. Di-Glyphosate (SL)	Sediment, nozzle clogging	Compatible
1. Mancozeb (WG); 2. NPK; 3. Di-Glyphosate (SL); 4. Fluxapyroxade + Pyraclostrobin (SC)	Sediment, nozzle clogging	Compatible 1*
1. Mancozeb (WG); 2. NPK; 3. Cletodim (EC); 4. Di-Glyphosate (SL)	Sediment, nozzle clogging	Compatible 2*
1. Mancozeb (WG); 2. NPK; 3. Azoxystrobin + Ciprocanazol (SC); 4. Chlorothalonil (SC)	Sediment, nozzle clogging	Compatible 3*
1. Mancozeb (WG); 2. NPK; 3. Azoxystrobin + Ciprocanazol (SC); 4. Cletodim (EC)	Sediment, nozzle clogging	Compatible 4*
1. Mancozeb (WG); 2. NPK; 3. Chlorothalonil (SC); 4. Fluxapyroxade + Pyraclostrobin (SC)	Sediment, nozzle clogging	Compatible
1. Mancozeb (WG); 2. NPK; 3. Acetamipride + Bifentrin (WG); 4. Azoxystrobin + Ciprocanazol (SC)	Sediment, nozzle clogging	Compatible 5*

2.1 gal/acre

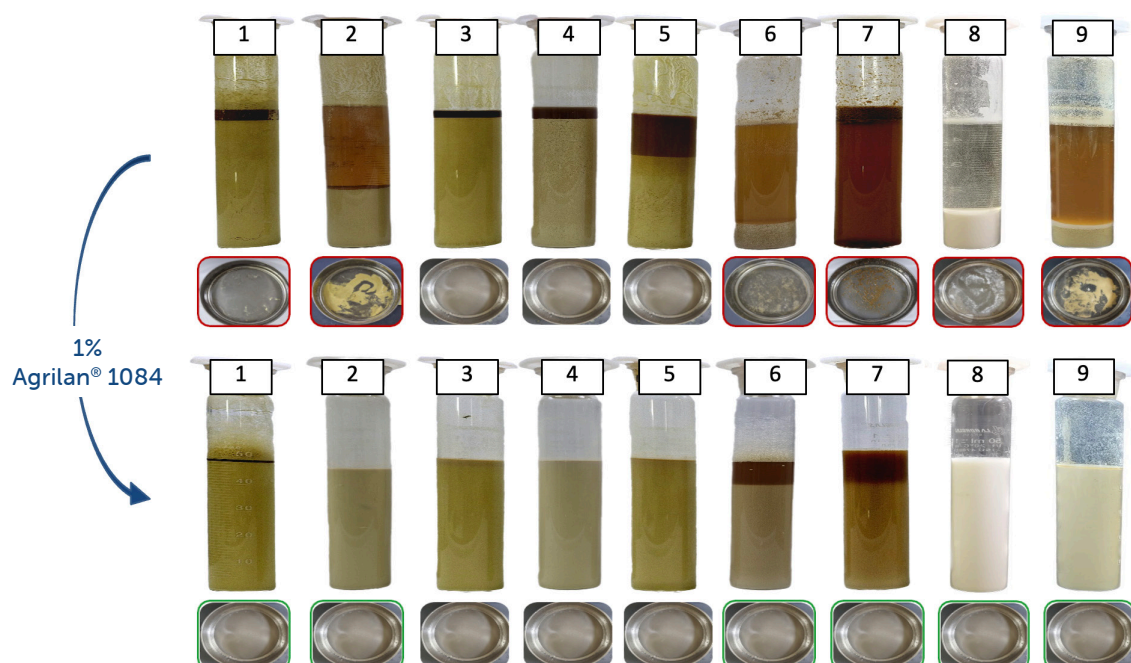
NPK mix with different formulations in water 500 ppm	No Agrilan® 1084	1% Agrilan® 1084 after 1 hour
1. NPK; 2. Cletodim (EC)	Oil separation	Compatible
1. NPK; 2. Fluxapyroxade + Pyraclostrobin (SC)	Phase separation, sediment	Compatible
1. NPK; 2. Mancozeb (WG)	Phase separation, sediment	Compatible
1. NPK; 2. Di-Glyphosate (SL); 3. Fluxapyroxade + Pyraclostrobin (SC); 4. Cletodim (EC)	Sediment, poor emulsion	Compatible
1. NPK; 2. Fluxapyroxade + Pyraclostrobin (SC); 3. Chlorothalonil (SC); 4. Di-Glyphosate (SL)	Sediment, poor emulsion	Compatible

2.1 gal/acre

Glyphosate mix with different formulations in water 500 ppm	No Agrilan® 1084	1% Agrilan® 1084 after 1 hour
1. K-Glyphosate (SL); 2. MnSO ₃ (WP)	Sediment, nozzle clogging	Compatible
1. K-Glyphosate (SL); 2. Fluxapyroxade + Pyraclostrobin (SC)	Sediment, nozzle clogging	Compatible
1. K-Glyphosate (SL); 2. Acetamipride + Bifentrin (WG)	Sediment, nozzle clogging	Compatible
1. Di-Glyphosate (SL); 2. Acetamipride + Bifentrin (WG)	Sediment, nozzle clogging	Compatible
1. Di-Glyphosate (SL); 2. Fluxapyroxade + Pyraclostrobin (SC)	Phase separation, sediment	Compatible
1. Di-Glyphosate (SL); 2. Cletodim (EC)	Oil separation	Compatible
1. NPK; 2. Di-Glyphosate (SL); 3. Acetamipride + Bifentrin (WG); 4. Fluxapyroxade + Pyraclostrobin (SC)	Phase separation, sediment	Compatible 6*
1. Di-Glyphosate (SL); 2. NPK; 3. Acetamipride + Bifentrin (WG); 4. Cletodim (EC)	Sediment, nozzle clogging	Compatible 7*
1. NPK; 2. Di-Glyphosate (SL); 3. Azoxystrobin + Ciprocanazol (SC); 4. Chlorothalonil (SC)	Phase separation, sediment	Compatible
1. Mancozeb (WG); 2. NPK; 3. Acetamipride + Bifentrin (WG); 4. Azoxystrobin + Ciprocanazol (SC)	Phase separation, sediment	Compatible
1. Di-Glyphosate (SL); 2. NPK; 3. Azoxystrobin + Ciprocanazol (SC); 4. Fluxapyroxade + Pyraclostrobin (SC)	Phase separation, sediment	Compatible

4.3 gal/acre

Glyphosate mix with different formulations in water 500 ppm	No Agrilan® 1084	1% Agrilan® 1084 after 1 hour
1. NPK; 2. Di-Glyphosate (SL); 3. Atrazine (WG); 4. Mineral oil (EC)	Nozzle clogging	Compatible 8*
1. NPK; 2. K-Glyphosate (SL); 3. Atrazine (WG); 4. Mineral oil (EC)	Nozzle clogging	Compatible 9*
1. NPK; 2. Di-Glyphosate (SL); 3. Mancozeb (WG); 4. Mineral oil (EC)	Nozzle clogging	Compatible
1. NPK; 2. K-Glyphosate (SL); 3. Mancozeb (WG); 4. Mineral oil (EC)	Nozzle clogging	Compatible
1. NPK; 2. Di-Glyphosate (SL); 3. Mancozeb (WG); 4. Mineral oil (EC)	Nozzle clogging	Compatible



Agrilan® 1084 has proven to be an excellent adjuvant, with significant potential to improve compatibility in low-volume tank mixtures. It can improve the mix compatibility of widely used products such as Glyphosate and Mancozeb.

Additionally, it offers other benefits in spraying, such as pH reduction, surface tension reduction, increased wettability and better spreadability.

Contact us directly for detailed product information and sample request
website | nouryon.com/markets/agriculture
email | agro@nouryon.com

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