



Agrilan[®] 1015



A biodegradable dispersant
for aqueous crop protection
formulations

Nouryon

Agrilan 1015

Agrilan 1015 is a biodegradable dispersant for aqueous crop formulations. It offers a unique patent-protected technology with tapered hydrophobic linking between the hydrophobic and hydrophilic moiety.

Key benefits

- Liquid dispersant
- Biodegradable and not persistent, addressing concerns regarding bio accumulative dispersants
- No risk or classified ingredients
- Emulsifying and wetting agent for water-based formulations, such as EW and SE
- Low foaming

Typical properties

Appearance	clear liquid
CMC	60 mg/l
Color	< 1 Gardner
Density at 20°C	1.06 g/l
pH	6.0
Solid content	50%
Surface tension at 0.1 wt%	32 mN/m
Viscosity* at 20°C	700 cps

*Brookfield DV-III Plus Rheometer; SC-18 spindle @ 25 rpm

Suggested SC formulation for Azoxystrobin, Tebuconazole or Diuron

Ingredient	g/L
Active	200-300
Morwet EFW	20
Agrilan 1015*	25
Ethylene glycol	50
Defoamer	1-2
Xanthan Gum	1-2
Water	up to 1 L

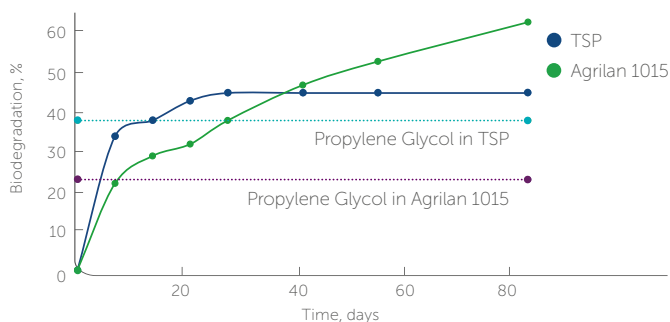
*Due to superior wetting of the dispersant, Agrilan 1015 could be used in lieu of the wetting agent (Morwet EFW)

Regulatory

- TSCA and FIFRA approved
- Meets REACH polymer exemption
- Listed in China and Japanese Chemical Inventory

Biodegradability

- Biodegradability of Agrilan 1015 as well as a competitor product based on Ethoxylated TSP-phosphate ester (TSP-PE) were evaluated
- Continues to biodegrade even after 12 weeks, whereas for TSP biodegradation levels out after three weeks
- Can be designated as inherently biodegradable and not persistent, whereas TSP-PE is nearly non-biodegradable and persistent

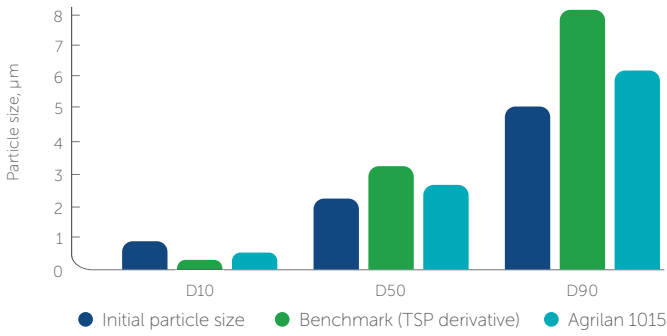


Percentage of biodegradation of Agrilan 1015 and TSP-PE by activated sludge. The horizontal line represents the percentage achieved upon complete degradation of propylene glycol.

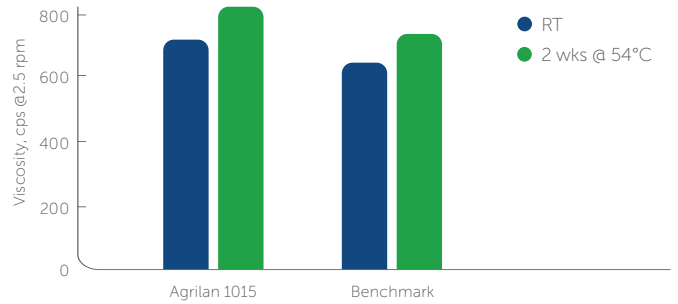
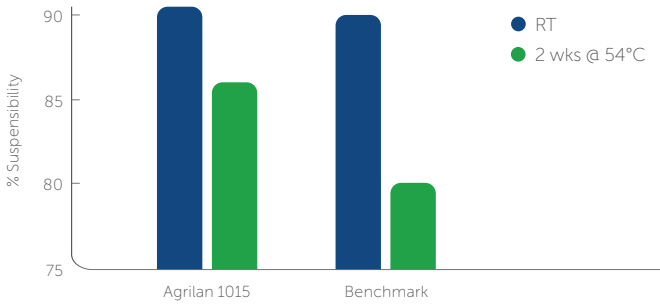


Diuron 300 g/L SC

Some particle size growth upon storage but under better control with Agrilan 1015.



- Overall viscosity profile for both SC's are similar (low to moderate viscosity)
- Similar suspensibility (~90%) at RT but Agrilan 1015 is more favorable upon storage



Biodegradable liquid dispersant Agrilan 1015 works either as well or better than benchmark

Guideline recipes

Azoxystrobin 250 g/L SC

Ingredient	g/L
Azoxystrobin	250
Agrilan 1015	40
Mono ethylene glycol	30
Biocide	2
Defoamer	2
Xanthan Gum	2
Water	up to 1 L

Physical appearance	off-white suspension
Particle size, d98, µm	3.5
Suspensibility	ca 100%
Stability, 0°C after 1 week	no bleeding
Stability, 54°C after 2 weeks	trace bleeding

Prochloraz 250 g/L EW

Ingredient	g/L
Prochloraz	250
Agrilan 1015	30
Berol 904	30
Solvesso 200	200
Defoamer	1
Mono ethylene glycol	50
Xanthan Gum	1.6
DI water	up to 1 L

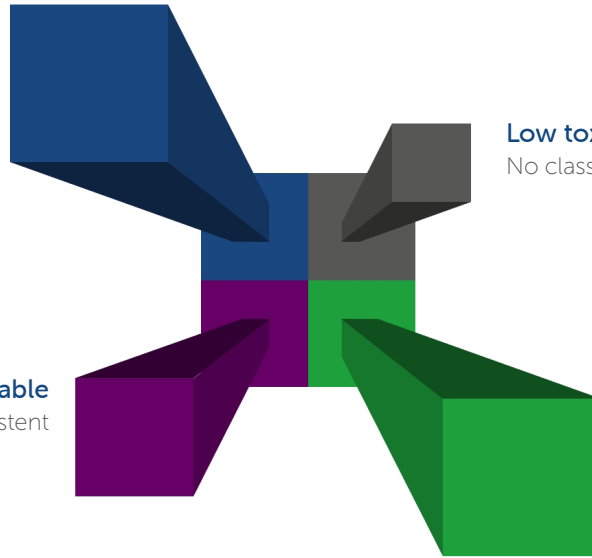
Physical appearance	white liquid
pH (5% in water)	7.7
Density, g/L, at 25°C	1.086
Emulsion stability (342 ppm)	stable (2 hrs)
Viscosity, cP, 30 rpm, S62, 25°C	520
Stability, 0°C after 1 week	stable
Stability, 54°C after 2 weeks	stable

Liquid dispersant
For crop protection, including
seed treatment formulations

Biodegradable
And non-persistent

Low toxicity
No classified ingredients

Emulsifier and wetting agent
For SEs and EWs, low foam



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