

Adsee® 611 Adjuvant

The next-generation amine technology adjuvant for tankside crop protection applications.



What is Adsee 611 Adjuvant?

- Adsee 611 is AkzoNobel's next generation Adsee AB adjuvant
- An adjuvant designed to exceed performance of alcohol ethoxylate and NPE
- A highly optimized blend of a fatty amine polymer with a quaternary compound

Why use Adsee 611 Adjuvant?

- Effective with herbicide, fungicide and insecticide applications
- Adsee 611 replaces and outperforms alcohol ethoxylates and NPE competitive products at the same use level
- Excellent as a tankside adjuvant in rice production
- Cost effective



Insecticide studies

Pymetrozine

25% WP on brown plant hopper

Treatment	LC ₉₀ (mg/L)	LC ₉₀ reduction
Pymetrozine (alone)	232.2	N/A
Adsee 611 (0.1% v/v)	142.3	38%
Nonylphenol 10EO (0.1% v/v)	209.9	9%

Summary Pymetrozine on brown plant hopper

- Adsee 611 was significantly improved over NP-10 in glasshouse using particulate formulation

Abamectin

1.8% EC on rice leaf roller

Treatment	LC ₅₀ (mg/L)	LC ₅₀ reduction
Abamectin (alone)	0.124	0.47
Adsee 611 (0.1% v/v)	0.096	0.44
Nonylphenol 10EO (0.1% v/v)	0.093	0.57

Abamectin on rice leaf roller

- Adsee 611 was improved over NP-10 in glasshouse using EC formulation



Nilaparvata lugens



Cnaphalocrocis medinalis

Fungicide studies

Tricyclazole

5% EC on rice blast

Treatment	EC ₅₀ (mg/L)
Tricyclazole (alone)	18.3
Adsee 611 (0.1% v/v)	16.9

Summary Tricyclazole on rice blast

- Adsee 611 and NP-10 were comparable in glasshouse using particulate formulations
- Adsee 611 significantly improves efficacy of Tricyclazole

Azoxystrobin

5% EC on rice sheath blight

Treatment	LC ₅₀ (mg/L)
Azoxystrobin (alone)	24.8
Adsee 611 (0.1% v/v)	18.7

Summary Azoxystrobin on rice sheath blight

- Adsee 611 and NP-10 were comparable in glasshouse using particulate formulations
- Adsee 611 significantly improves efficacy of Azoxystrobin



Pyricularia oryzae



Rhizoctonia solani

Typical physical properties

Property	Value
Appearance	Amber liquid
pH (5% in water)	6-7
Flash point (PMCC)	>200 °F
Moisture	1.0% max
Specific gravity @ 77 °F	0.976

Use recommendations

- Adsee 611 is designed specifically for mixing with crop protection products in the immediately prior to spraying. It is important to add Adsee 611 after the crop protection product to avoid possible compatibility problems.
- Recommended use rate is 0,1% (100 ml Adsee 611 to 100 l water). The adjuvant is low viscous liquid and mixes easily with water at normal temperature. It performs equally well in soft and hard water.
- Due to its cationic character, Adsee 611 can form precipitates with anionic components in the tank.

EPA LISTED

Ingredients in Adsee 611 adjuvant are listed under 40 CFR 180.920.

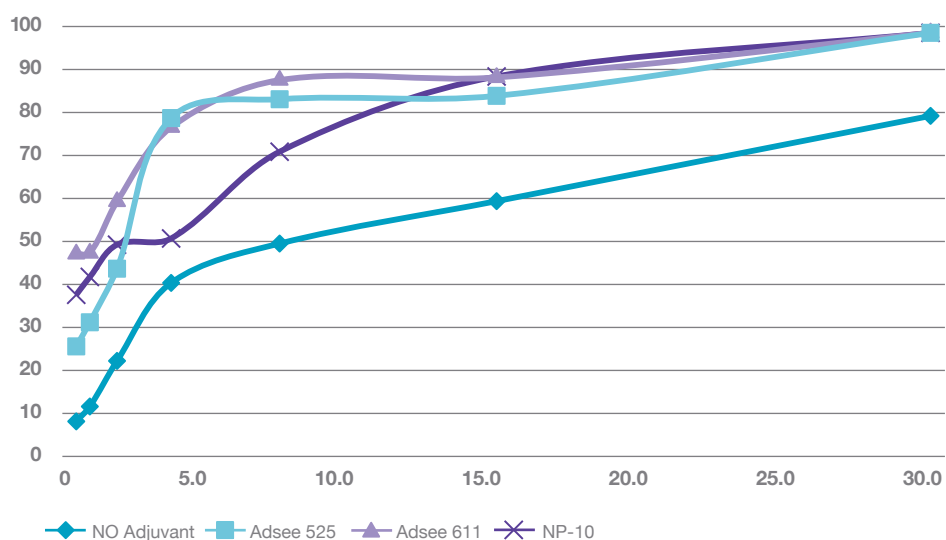
Adsee 611 adjuvant is a new option to replace NPE's or alcohol ethoxylate adjuvants

Herbicide studies

Bispyribac-Na on Barnyardgrass

The Bispyribac -sodium herbicidal activity treatments on Barnyardgrass have obvious adjuvant synergies. Adsee 611 is slightly higher than the other two additives; however, there was no statically significant difference between adjuvants in this small study.

Percent weed control (fresh wt basis) at 20DAT vs. g ai/ha (adjuvant at 0.1% v/v)



Barnyardgrass Rate Response

Dose G ai/ha	No Adj	Adsee 525	Adsee 611	NP-10
0.47	8.28	25.99	47.81	38.71
0.94	11.90	31.68	48.01	42.38
1.88	22.56	44.33	60.19	49.99
3.75	40.97	79.88	77.71	51.46
7.50	50.26	84.33	88.84	71.94
15.00	60.27	85.13	89.47	89.70
30.00	80.40	100.00	100.00	100.00



Planet Possible: Our commitment to doing more with less

Our success as a company depends on sustainability. At AkzoNobel we have sharpened our focus on sustainability by reviewing our sustainability risks and opportunities against global trends and evaluating how they will impact our customers by 2020. We express the outcome as our Planet Possible approach to sustainability. It's our commitment to creating more value from fewer resources.



We know only too well that our future hinges on our ability to radically do more while using less.

- More innovation, less traditional solutions;
- More renewable energy and materials, less fossil-based;
- More value chain focus, less introverted thinking.

Employing our new strategy of radical efficiency, we work with customers and suppliers to open infinite possibilities to a finite world. Learn more at www.akzonobel.com/planetpossible

Number 1

was our position in the Materials industry group on the 2013 Dow Jones Sustainability Index.

At least 20%

is the share of revenue we aim to achieve by 2020 from products with a sustainability advantage for customers.

More than 25%

is the reduction we aim to achieve in our cradle-to-grave carbon foot print per ton of product by 2020.

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