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TECHNICAL DATA SHEET

H-625

Spray Adjuvant for herbicide

DESCRIPTION

H-625 Spray Adjuvant for herbicide is a proprietary trisiloxane alkoxyolate based wetting agent, used as a penetrant for herbicide applications (e.g. glyphosate).

Unlike traditional trisiloxane alkoxyolates, which can inhibit uptake of glyphosate into grasses, **H-625** spray adjuvant helps overcome this problem, by enhancing performance relative to conventional tallow amine ethoxyolate based spray adjuvants.

Although most trisiloxane superspreaders are excellent wetting agents (i.e. H-77* adjuvant), it has been demonstrated that spreading is not always beneficial to herbicide uptake and performance . Figure 1 illustrates that superspreading can reduce the concentration of herbicide per unit area. In some cases this is believed to limit herbicide uptake into grasses. Evidence suggests that cuticular penetration of herbicide is favored by organosilicone sprays that do not superspread, thereby giving a higher concentration of herbicide/unit area. **H-625** spray adjuvant is designed to provide the penetration properties associated with trisiloxane alkoxyolates, but limits the superspreading property to achieve the optimum balance.

Key Features and Benefits

Promotes rapid penetration of herbicides into grasses

Improves spray coverage

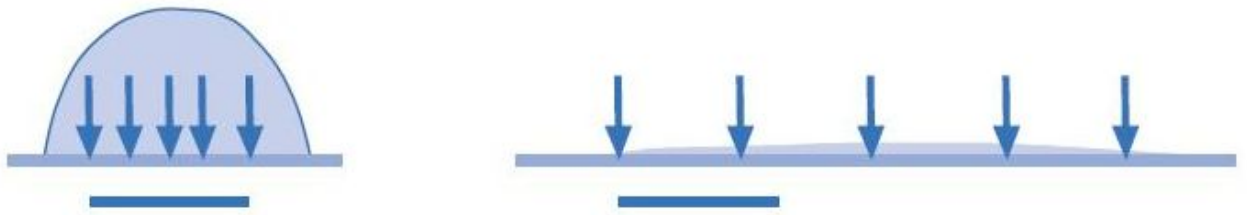
Controlled spreading overcomes antagonism associated with TSAs and glyphosate on grasses

Reduced use levels relative to tallow amine ethoxyolates

Low use rates make **H-625** spray adjuvant an excellent candidate for "In-can" formulations (25 to 100 g/L formulation)

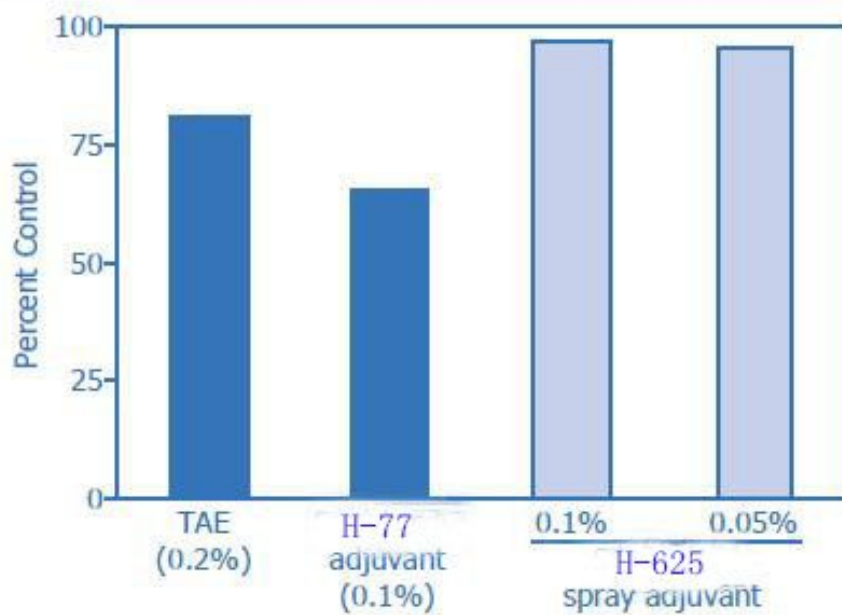
Equivalent: Momenive Silwet 625

Figure 1: Effect of Spreading on Herbicide Distribution on the Leaf Surface



As a result of the unique composition of **H-625** spray adjuvant, improved efficacy may be achieved at use levels up to 4 times less than a conventional tallow amine ethoxylate. Figure 2 demonstrates that **H-625** spray adjuvant is an effective adjuvant for glyphosate in controlling barnyardgrass (*Echinochloa crus-galli*) relative to a trisiloxane alkoxyate superspreader (H-77 adjuvant), and a tallow amine ethoxylate containing 15 EO units.

Figure 2: Impact of Spray Adjuvant Type on Control of Barnyardgrass with Glyphosate^(a)
(Rain 2 HAT, Results @ 14 DAT)



(a) Glyphosate used as the isopropylamine salt at 0.75% in a relative spray volume of 100L/ha. Simulated rainfall was applied at 2 Hours After Treatment (2.5 cm).

TYPICAL PROPERTIES

Appearance at 25°C	Clear amber liquid
Surface Tension, mN/m (0.1 wt%) (a)	33
Viscosity (cps) (b)	144

Spread Diameter, mm (0.5 wt%) (c)	7
Cloud Point (0.1 wt %), °C	>100
Flashpoint, PMCC °C (°F)	82 (180)

(a) Surface Tension by Wilhelmy Plate Method

(B) Brookfield Viscosity: 25°C, Spindle LV-3, 100 rpm

(c) Deionized water, 25°C

USES AND APPLICATION

In Agrochemical Formulations

H-625 spray adjuvant may be used as a component in agrochemical formulations. Although organosilicone surfactants are subject to hydrolysis under acidic or basic conditions, optimum performance is achieved by buffering the formulation to pH 6.5-7.5. Additionally, it is recommended that **H-625** spray adjuvant be used at a concentration of at least 5%, based on the total formulation.

As A Tank Mix Adjuvant

H-625 spray adjuvant, when used as a tank-side adjuvant may be used to improve spray coverage, improve uptake or to allow for a reduction in spray volume. **H-618** spray adjuvant is most effective as a tank-side adjuvant when spray mixtures are 1) within a pH range of 5-8, and 2) used within 24 hours of preparation.

H-625 spray adjuvant, when used as a tank-side adjuvant may improve herbicide performance. Silwet 625 spray adjuvant is most effective as a tank-side adjuvant when spray mixtures are 1) within a pH range of 5-8, and 2) used within 24 hours of preparation.

Typically **H-625** spray adjuvant is used at 0.025% to 0.1% in the spray tank.

SAFETY

Before handling, read the Material Safety Data Sheet and container label for safe use, physical and health hazard information.

STORAGE AND SHELF LIFE

After sealing packaging products stored in a cool, dry place, **H-625** has a shelf life of 36 months from date of manufacture.

PACKAGING

H-625 is available in 200L drum and 1000L IBC or others.

LEGAL DISCLAIMER

Hito chemical believes that the information in this technical data sheet is an accurate description of the typical uses of the product. Hito Chemical, however, disclaims any liability

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