

Silwet™ ECO Super Spreader

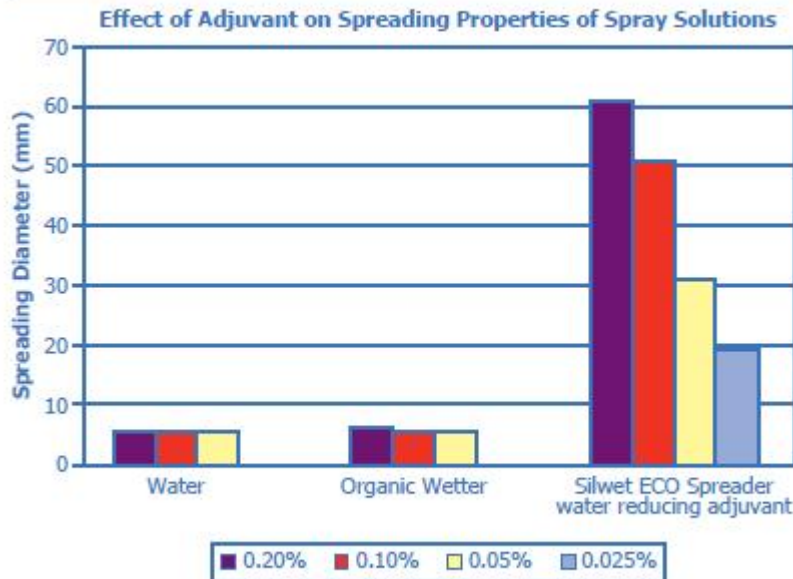
Silwet© Eco Spreader

Description

Silwet ECO Spreader water reducing adjuvant is a low foaming activator/spreader used in agriculture. It is listed by the Organic Materials Review Institute (OMRI) for use in organic production. Silwet ECO Spreader water reducing adjuvant helps reduce the surface tension of spray solutions beyond what can be achieved with conventional adjuvants, to allow lower spray volumes and related pesticide application costs.

Silwet ECO Spreader water reducing adjuvant is a superspreading surfactant that can quickly reduce the contact angle of spray solutions on foliar surfaces, thereby promoting increased surface coverage (Figure 1).

Fig. 1: Spreading of Agricultural Adjuvants

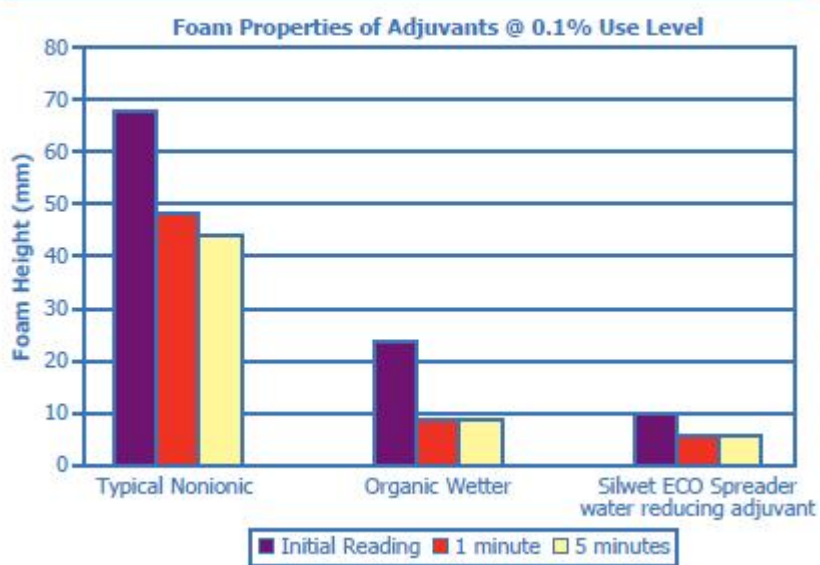


Note: Spreading on polyacetate film

This increase in spray coverage means that water requirements may be significantly reduced up to 70% of “spray to run-off” volumes in many crop applications. This makes Silwet ECO Spreader water reducing adjuvant a great choice to consider when water conservation and pesticide application costs are important.

The low foaming properties of Silwet ECO Spreader water reducing adjuvant typically make it much easier to handle than other activator-spreader adjuvants (Figure 2).

Fig. 2: Foaming of Agricultural Adjuvants



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Key Features and Benefits

- Superspreader for improved coverage
- Potential for 25-75% lower spray volumes and costs
- Effective with most low temperature applications
- Low foaming
- Nonionic
- Meets requirements for EPA 40CFR§180.910

Typical Physical Properties

Surface Tension (0.1%), mN/m	21.5
Cloud Point (0.1wt%), °C	<10
Critical Micelle Concentration (wt%)	0.003
Pour Point, °C	-50
Viscosity @ 25°C, cps	22
Flash Point, PMCC, °C	143
Specific Gravity @ 25°C	1.002

Potential Applications

Applications	Typical Use Rates ^(a)
Plant Growth Regulators	0.025% to 0.05%
Herbicide	0.025% to 0.15%
Insecticide	0.025% to 0.1%
Fungicide	0.025% to 0.15%
Fertilizers & Micronutrients	0.015% to 0.1%

(a) Note: use rates are dependent on crop, agrochemical and spray volume requirements.

Product Usage

In Agrochemical Formulations

Silwet ECO Spreader water reducing adjuvant may be used as an effective adjuvant 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 Silwet ECO Spreader water reducing adjuvant be used at ~5% concentration, based on the total formulation.

As a Tank Mix Adjuvant

Silwet ECO Spreader water reducing adjuvant when used as a tank-side spray adjuvant may be used to lower spray application volumes. Silwet ECO Spreader water reducing 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.

High spray volumes, coupled with high surfactant rates, are not generally required to achieve sufficient coverage with the Silwet ECO Spreader water reducing spray adjuvant. In fact, the Silwet ECO Spreader water reducing spray adjuvant may provide adequate coverage in many low volume spray applications at rates between 0.025% and 0.1%.

Patent Status

Technical subject matter in this publication is described and protected by one or more of the following U.S. Patents and their foreign counterpart patents and/or patent applications: U.S. Patent No. 5,504,054. Other U.S. and foreign patents and/or patent applications not listed covering the subject matter may be relevant.

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