

# Silwet™ ECO Super Spreader

Silwet© Eco Spreader

#### Description

Silwet ECO Spreader water reducing adjuvant is a low foaming activatorspreader 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).

Effect of Adjuvant on Spreading Properties of Spray Solutions

70

60

50

30

20

Water Organic Wetter Silwet ECO Spreader water reducing adjuvant

**0.10%** 

0.05%

Fig. 1: Spreading of Agricultural Adjuvants

Note: Spreading on polyacetate film

■ 0.20%

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.

0.025%

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).

Foam Properties of Adjuvants @ 0.1% Use Level

80

70

60

60

10

Typical Nonionic

Organic Wetter

Silwet ECO Spreader water reducing adjuvant

Initial Reading 1 minute 5 minutes

Fig. 2: Foaming of Agricultural Adjuvants

### **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**

<sup>\*</sup>Silwet is a trademark of Momentive Performance Materials

Applications	Typical Use Rates <sup>(a)</sup>
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%

<sup>(</sup>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.

### Standard copy to come

### **Product Safety, Handling and Storage**

Standard copy to come

#### Limitations

Standard copy to come

#### **Contact Information**

Email

commercial.services@momentive.com

Telephone			
Americas	Latin America	<b>EMEAI- Europe, Middle</b>	<b>ASIA PACIFIC</b>
		East, Africa & India	
+1 800 295 2392	Brazil	Europe	China
Toll free*	+55 11 4534 9650	+390510924300	800 820 0202
+704 805 6946	Direct Number	Direct number	Toll free
Direct Number			+86 21 3860 4892
			Direct number
*All American	Mexico	India, Middle East &	Japan
countries	+52 55 2169 7670	Africa	+81 3 5544 3111
	Direct Number	+ 91 44 71212207	Direct number
		Direct number*	
		*All Middle Eastern	Korea
		countries, Africa, India,	+82 2 6201 4600

For literature and technical assistance, visit our website at: www.momentive.com

#### **DISCLAIMER:**

THE MATERIALS, PRODUCTS AND SERVICES OF MOMENTIVE PERFORMANCE MATERIALS INC. AND ITS SUBSIDIARIES AND AFFILIATES (COLLECTIVELY "SUPPLIER"), ARE SOLD SUBJECT TO SUPPLIER'S STANDARD CONDITIONS

OF SALE. WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION. RECOMMENDATIONS. OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SUPPLIER MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (i) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING ITS PRODUCTS, MATERIALS, SERVICES, RECOMMENDATIONS OR ADVICE. **EXCEPT AS PROVIDED IN SUPPLIER'S STANDARD CONDITIONS OF SALE.** SUPPLIER AND ITS REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS OR SERVICES DESCRIBED HEREIN. Each user bears full responsibility for making its own determination as to the suitability of Supplier's materials, services, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating Supplier's products, materials, or services will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of Supplier's standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by Supplier. No statement contained herein concerning a possible or suggested use of any material, product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of Supplier covering such use or design, or as a recommendation for the use of such material, product, service or design in the infringement of any patent or other intellectual property right.

\*Silwet™는 Momentive Performance Materials Inc.의 상표입니다.

The use of the "TM" symbol designates registered or unregistered trademarks of Momentive Performance Materials Inc. or its affiliated companies. Momentive and the Momentive logo are trademarks of Momentive Performance Materials Inc.