

Silwet* HS-604

Penetrant with Glyphosate for *Panicum maximum* Weed Control



Application

The biological efficacy of glyphosate, perhaps more than any other herbicide, can be very dependent on the surfactant or adjuvant in the spray solution. Many of the glyphosate formulations today are loaded with certain activator penetrant surfactants, while many others depend on the users to add the appropriate adjuvant surfactant. One of the most common penetrant adjuvants in glyphosates is tallow amine ethoxylate (TAE), which promotes the rapid uptake of the herbicides in addition to enhancing spray retention on a wide range of weeds.

Silwet HS-604 penetrant is a new pH stable silicone co-adjuvant optimized for use in many herbicide applications. It is a potentially cost effective product to lower the total adjuvant in many in-can glyphosate and related herbicides formulations, while providing at least equivalent herbicide performance to control weeds. To demonstrate the specific benefits of this adjuvant, Silwet HS-604 penetrant was trialled with a standard glyphosate formulation to control *Panicum maximum* (guinea grass) weeds.

Field Trials

Location	Brazil
Crop	Weed control
Pesticides	ZAPP QI – Sulphosate and Standard Glyphosate (16% TAE adjuvant loading) Pesticide use rate : 2,500 ml/ha
Pest	<i>Panicum maximum</i> (Guinea grass)
Adjuvants	TAE and Silwet HS-604 (Use rate: 45g/L TAE + 5g/L Silwet 604)
Application	In-can (Spray rate: 200 liters/ha)

Note: Test data. Actual results may vary.

Results

Field trials demonstrated the following benefits resulting from the addition of the Silwet HS-604 penetrant to a standard glyphosate formulation for controlling *Panicum maximum* weeds:

- Equivalent weed control with faster initial burndown, when compared to 16% TAE formulation
- 70% lower chemical adjuvant use (5% adjuvant with Silwet HS-604 penetrant versus 16% TAE adjuvant)
- Potentially lower eye irritation due to significantly lower in-can adjuvant use
- Much less foaming with Silwet HS-604 penetrant compared to the 16% TAE glyphosate formulation

Customer Service Centers

Worldwide Hotline

4information@momentive.com

+1 614 986 2495 / T +1 800 295 2392

North America

Silicones – Fluids, UA, Silanes, Specialty Coatings, RTV and Elastomers

T +1 800 523 5862 / +1 800 334 4674
F +1 304 746 1654 / +1 304 746 1623

Consumer Sealants/

Construction Sealants and Adhesives

T +1 877 943 7325
F +1 304 746 1654

Latin America

South America

T +55 11 4534 9650
F +55 11 4534 9660

Mexico and Central America

T +52 55 2169 7670
F +52 55 2169 7699

Europe, Middle East, Africa and India

T +00 800 4321 1000 / +40 21 3111848

Pacific

China

T +800 820 0202 / +86 21 3860 4892

Japan

T +0120 975 400 / +81 276 20 6182
F +81 276 31 6259

Korea

T +82 2 6201 4600
F +82 2 6201 4601

Malaysia

T +60 3 9206 1555
F +60 3 9206 1533

Thailand

T +66 2207 3456
F +66 2207 3488

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22 Corporate Woods Boulevard
Albany, NY 12211 USA
momentive.com