

**MOMENTIVE™**

**Silicones:  
Bringing  
Benefits Home**



# Experience the Momentive Difference

With more than 70 years of silicone expertise, Momentive is a world leader in providing home, laundry and automotive care formulators with the tools they need to set their products apart from the competition. You can count on Momentive for innovative, formulation-friendly and cost-effective product enhancements your customers can't help but notice.

## Worldwide Reach, Local Touch

Our global manufacturing and sales networks, backed by outstanding technical support, enable us to address your particular challenges and requirements almost anywhere in the world—from North and South America to Africa, Europe, the Middle East, and all through Asia. Our customer-focused culture ensures world-class service with a local, personal touch.

## Deep Applications Expertise

How can Momentive silicones improve your product line? We have developed key technology enablers in the following categories:

- Spreading and Wetting
- Foam Control
- Surface Modification
- Softening and Conditioning

When incorporated into home care, laundry care or automotive care products our silicones can provide benefits that your customers value.

Silicone technologies from Momentive can improve the performance of a wide variety of consumer products—whether it be enhanced foam control for high efficiency laundry detergents, better stain removal for hard and soft surface cleaners or improved gloss and shine for auto finishes and tires.

## Save Time, Save Money

Momentive specialty silicones can facilitate home care products with enhanced performance, adding benefits such as convenience and energy savings for your customers while potentially lowering your own costs for content, packaging and shipping. Our technology enablers can help make your products more:

- Effective
- Easy to use/time saving
- Economical
- Sustainable

## Collaboration to Advance Innovation

Momentive places a premium on our customer relationships—we listen. Our aim is to understand your goals and processes so that we can provide ongoing, intelligent technical support, helping you to meet your sales and marketing targets.

## Spreading and Wetting

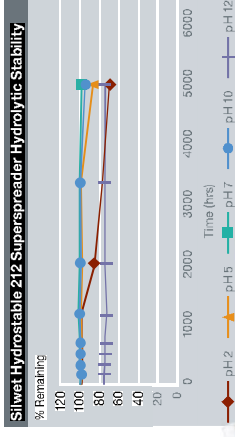
Silwet® Hydrostable® superspreaders represent a totally new technology. These organomodified silicones have been shown to enable improved spreading and lower surface tension in water-based formulations, over a wide pH range. They can enhance penetration of other actives and replace fluorosurfactants in many applications.

Useful on household and automotive hard and soft surfaces, this technology is:

- **Effective**  
Silwet Hydrostable superspreaders used at low addition levels can improve cleaning performance and enhance surface properties of fabric and hard surfaces.
- **Economical**  
These superspreaders demonstrate enhanced penetration so that you get more mileage, value and profitability from the chemicals you add to your formulation. In fact, all of our surfactants are 100% active—there are no dilutions or blends. Using Silwet technology is an opportunity to optimize cost/performance, providing the kind of benefit enhancement that turns ordinary products into differentiated best-sellers.

When used on these substrates, Silwet Hydrostable superspreaders may lead to the following product claims and benefits:

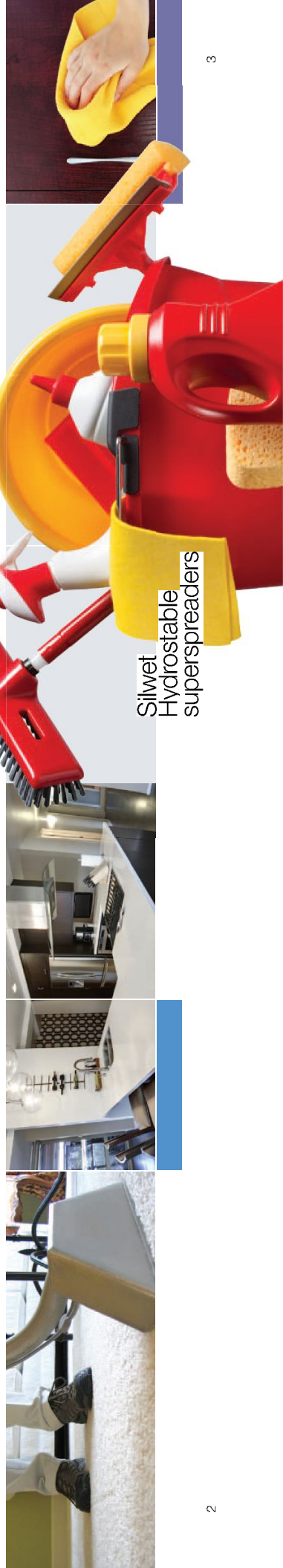
Surface	Potential Benefits
Marble/granite, vinyl/linoleum, wood/laminate, ceramic/tile	Easy clean, quick release, reduced streaking
Glass, ceramic, stainless steel	Anti-fog/anti-streak, quick dry, sheeting, spot reduction, anti-scale
Laundry, carpet/upholstery	Stain release, anti-soil, quick dry, increased penetration/covers/stain removal, lubricity, pro (or anti) foaming, pH stability, storage stability
Automotive finishes, tires and wheels, glass	Shine, depth of gloss, sheeting, beading, anti-fog, soil release



- **Sustainable**  
The enhanced spreading, wetting and penetration effects of Silwet Hydrostable superspreaders can help support the development of products with better sustainability profiles by boosting the performance of cleaning actives in your formulation. This can result in home care products with lower active ingredient levels, simplified formulae with fewer ingredients and concentrated products requiring less packaging. In addition, Silwet Hydrostable superspreaders also have the potential to enable new home care products with functionalities that could reduce water utilization and/or energy consumption during the cleaning process.

**Silwet Hydrostable excellent candidates for use in a multitude of aqueous systems such as kitchen cleaners, bath and shower cleaners, and toilet cleaners, as well as laundry, carpet/upholstery, and floor care products.**

**Product Line**  
Silwet Hydrostable 68 superspreader  
Silwet Hydrostable 212 superspreader  
Silwet Hydrostable 611 superspreader



Silwet Hydrostable superspreaders

## Foam Control

Momentive's SAG™ foam control agents can effectively manage foam to improve the functionality of a product and/or improve efficiency during the manufacturing process. Cost effective and simple to use, SAG foam control agents are highly compatible in a multitude of home care product formulations and generally provide rapid, durable foam control. SAG foam control agents are also technology enablers for home care products that require low foaming properties for optimum performance, such as high efficiency (HE) liquid laundry detergents.

SAG foam control agents are typically:

- Effective**  
 Momentive's foam control products have been shown to provide excellent foam control properties at lower use levels than competitive offerings and remain stable in diverse concentrated detergent formulations over a wide range of pH.
- Convenient**  
 It has been demonstrated that this technology enables concentrated products that require smaller package sizes and lower dosage.

- Economical**  
 Consider that SAG foam control agents may lower costs in two main ways. They are effective at lower dosages than other, similar products, thus reducing overall product cost; and they enable more concentrated formulae, so packaging costs may also be reduced.
- Sustainable**  
 This technology may enable better performing, high efficiency, concentrated laundry detergents that require lower water and energy consumption and reduced packaging requirements.

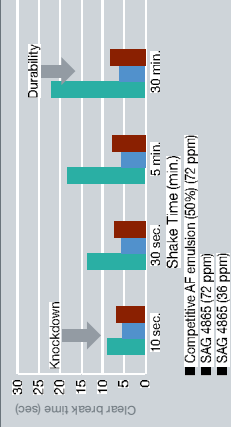
### Product Line

- SAG 4865 foam control agent
- SAG 4765 foam control agent
- SAG 47 foam control agent
- SAG 638 foam control agent

SAG foam control agents typically deliver the following features and potential benefits:

Features	Potential Benefits
Easy-to-use product form	Economical to use
Effective at low dosage levels	Excellent compatibility in home care formulations
Rapid foam knock down	Technology enabler for today's high efficiency, low-water usage laundry detergents
Durable foam control	
Stability	

### SAG Foam Control Agents Knock Down Foam Faster



## Surface Modification

Momentive's Formasil™ silicone additives for aqueous, solvent or oil-based systems generally deliver the surface effects that consumers desire in household and automotive care products. Effective at low incorporation levels, these additives have been shown to provide stain release properties, high-gloss and a smooth finish to hard surfaces. They generally impart hydrophobicity to substrates such as glass, ceramic and metal. The Formasil line has been proven to provide additional benefits such as enhanced spreading, penetration, leveling and compatibility of organic oils, for polishes and waxes.

Momentive's surface modification products are generally:

- Effective**  
 These specialty silicones provide unique surface modification effects at low use levels, for a wide range of water-based and oil-based surface care products.
- Convenient**  
 This technology has been tested with multifunctional surface care products that provide cleaning, stain and streak resistance, and protection—all in one.

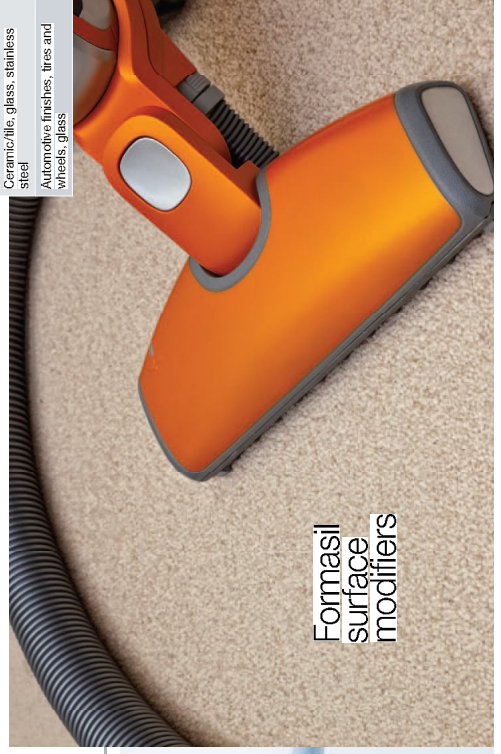
**Formasil surface modifiers may be considered for use in kitchen cleaners, bath and shower cleaners, toilet cleaners, glass cleaners, polishes and waxes, and floor care and car care products.**

### Product Line

- Formasil 433 surface modifier
- Formasil 593 surface modifier

Surface	Potential Benefits
Marble/granite, vinyl/linoleum, wood/laminate	Shine/gloss enhancement, anti-soil, protection/durability
Ceramic/tile, glass, stainless steel	Anti-fog, anti-streak, anti-scale, sheening/beading
Automotive finishes, tires and wheels, glass	Shine, depth of gloss, sheening, beading, anti-fog, soil release

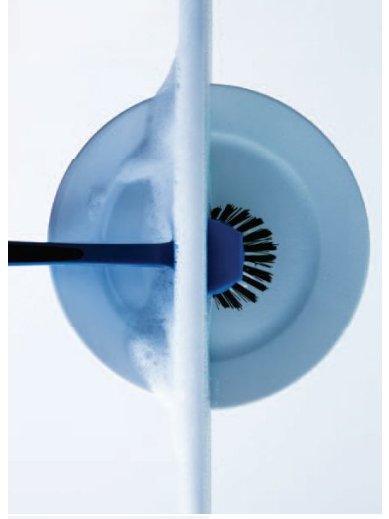
When used on these substrates, Formasil may lead to the following new product claims and potential benefits:



Formasil surface modifiers



SAG foam control agents



# Softening and Conditioning

Laundry care product manufacturers can look to Momentive's Formasil<sup>®</sup> B silicone fabric softener for its unique structure, which has demonstrated unique benefits. This substance evenly penetrates the fibers to impart outstanding hydrophilic properties. The key is Momentive's patented linear (AB)<sub>n</sub> block-copolymer technology, equipped with a patented hydrophilic functional group. This (AB)<sub>n</sub> quat exhausts better and lasts longer than traditional softening actives. The result is a remarkably durable, voluminously smooth, soft conditioning effect.

- Effective**  
 Testing shows that Formasil B fabric softener delivers, at low dosage levels, a hydrophilic, luxuriously soft and flexible conditioning effect to a variety of fabrics. Its excellent affinity for many fiber types translates into a durable softness and "like new" hand that has been demonstrated to last after multiple home laundry cycles.
- Convenient**  
 This agent is typically easy to incorporate into liquid laundry detergent formulations. It can be added directly into the water phase of a liquid laundry detergent formulation prior to blending, or it can be post-added directly into the formulated detergent liquid.
- Economical**  
 The efficiency of (AB)<sub>n</sub> technology generally allows Formasil B fabric softener to deliver desirable fabric care effects at low dosage levels. This makes Formasil B fabric softener economical to incorporate into detergent formulations and an excellent candidate for use in both premium brand and value brand laundry care products.

## Product Line

Formasil B silicone fabric softener

- Sustainable**  
 Formasil B does not contain alkyl phenol based chemicals—it is produced without the use of APEOs, which have been identified by the United States Environmental Protection Agency as presenting potential environmental concerns.

Formasil fabric softener may be considered for use on cotton and cotton-blend, light or heavyweight fabric, wovens and knits, synthetic fabrics, wool and wool-blend fabrics.

When used in laundry care products, Formasil B silicone fabric softener may potentially provide the following to formulators and manufacturers:

Potential Benefits for Formulators	Potential Product Claims for Manufacturers
Easy to use liquid form	Enhanced softness that lasts after multiple laundry cycles
Low viscosity	Silky fabric feel
Easily dispersible in water	Anti-static
Can be directly blended with liquid detergent	Extremely low yellowing
Good stability in 2-in-1 liquid laundry detergent systems	Improved fiber elasticity and shape retention
Lower dosage required	Excellent affinity for many different fiber types
	Does not hinder absorbency of fabrics as traditional softening agents do
	Enables multifunctional, one-product solutions for cleaning/softening laundry
	Formulated without APEO



Formasil B  
silicone fabric  
softener



Product Name	Product Description	% Active	Surfaces						Potential Benefit(s)										Potential End Uses								
			Rubber	Vinyl	Leather	Glass	Metal	Plastic	Shine	Depth of Gloss	Stain Resistance	Protection	Durability	Sheeting	Beading	Pro-Foaming	Penetration	Anti-Fog	Ease of Application	Leveling	Paste Wax	Liquid Wax	Car Wash	Tire Dressing	Leather/Vinyl Dressing	Glass Care	Aqueous Based
Formasil* 433	Silicone Fluid	100	X	X	X	X	X	X												X	X		X	X		X	
Formasil 583	Silicone Fluid	100	X	X	X	X	X	X												X	X		X	X		X	
Silwet* L-7608	Surfactant	100	X	X	X	X	X	X																			
SF1706	Silicone Fluid	100						X												X	X		X	X		X	
Silwet HYDROSTABLE* 212	Superspreader/ Wetting Agent	100	X	X	X	X	X	X																			
Silwet HYDROSTABLE 611	Superspreader/ Wetting Agent	100	X	X	X	X	X	X																			
Silwet HYDROSTABLE 68	Superspreader/ Wetting Agent	100	X	X	X	X	X	X																			
SM2068A	Silicone Emulsion	35	X	X	X															X	X		X	X		X	

## Customer Service Centers

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