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## **VORASURF™ Polyurethane Additives**

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### A reliable supply of proven, high-quality materials

You need a supplier that can deliver the high-quality silicone surfactants you require, on time and in-spec – a supplier with the technical expertise needed to help you optimize your system, solve problems and develop innovative products for your customers. Known and trusted worldwide as a provider of silicone products and innovation, Dow brings you:

- Experience in the development, production and customization of silicone surfactants for polyurethane foam applications
- An extensive toolbox of proven Dow silicone surfactants for flexible, rigid and microcellular polyurethane foam
- Array of global resources, game-changing science and technical know-how
- An exceptional range of value-added polyurethane systems, components and additives

### Collaborative innovation and problem-solving support

Understanding how a silicone surfactant will interact with your system is critical to your success. While other silicone suppliers may guard this knowledge, Dow is poised to readily share its deep understanding of silicone surfactant technology.

When you choose silicone surfactants from Dow, our team will work with you to ensure that you understand not only how the surfactant affects polyurethane foam formulation but also how you can maximize its ability to achieve desired foam characteristics. It's all part of our commitment to support innovation and growth across the polyurethane foam industry through the power of collaboration.

### Explore our extensive toolbox of proven silicone surfactants

Silicone surfactants from Dow can increase the compatibility of your raw materials and decrease the surface tension of your polyurethane foam system. They improve emulsification and nucleation, prevent coalescence, and stabilize cell membranes.



Flexible Slabstock Foam					
Product Name	Wide Processing Latitude	Efficiency	Suitable for Fire Retardant	Viscoelastic	Description
VORASURF™ DC 198 Additive		H			High-efficiency surfactant for flexible slabstock foam
VORASURF™ SZ 1142 Additive	X	M/L		X	Medium/low-efficiency surfactant for viscoelastic slabstock foam
VORASURF™ SZ 1328 Additive					High resiliency flexible slabstock surfactant
VORASURF™ SZ 1952 Additive		H		X	Non-hydrolysable surfactant used in TDI viscoelastic slabstock foam applications
VORASURF™ SZ 1959 Additive		H		X	Non-hydrolysable surfactant used to create fine, open cells, in TDI viscoelastic slabstock foam applications
VORASURF™ FF 2904 Additive	X	M		X	Medium-efficiency surfactant for flexible slabstock foam
VORASURF™ DC 5043 Additive					High resiliency flexible slabstock surfactant
VORASURF™ DC 5125 Additive	X	M	X		A wide-processing-latitude surfactant for use in conventional and flame-resistant grades of polyether slabstock foam
VORASURF™ DC 5160 Additive	X	M	X		Medium-efficiency silicone surfactant for production of flexible slabstock and rigid foam
VORASURF™ DC 5188 Additive		H			High-efficiency silicone surfactant with good emulsification capability for use in flexible slabstock foam
VORASURF™ DC 5417 Additive	X	M			Silicone surfactant for use in conventional flexible slabstock foam
VORASURF™ FF 5526 Additive					Surfactant for polyester slabstock foam
VORASURF™ DC 5810 Additive		H	X		High-efficiency surfactant for a wide range of conventional and FR slabstock foam
VORASURF™ DC 5900 Additive	X	M	X		A wide-processing-latitude, medium-efficiency silicone surfactant for flexible foams
VORASURF™ DC 5906 Additive	X	H/M	X		Wide-processing-latitude general-purpose surfactant for all blowing agents
VORASURF™ DC 5933 Additive	X	M			Wide-processing-latitude surfactant for low-density flexible slabstock and box foam
VORASURF™ DC 5943 Additive					Medium-efficiency surfactant for slabstock foam
VORASURF™ DC 5950 Additive	X	M/L	X	X	Medium-efficiency surfactant that exhibits improved flame-retardant properties of flexible slabstock foam
Additive VORASURF™ DC 5982 Additive	X	M	X		Medium-efficiency silicone surfactant for flexible slabstock foam; particularly useful in CO <sub>2</sub> -blown technologies
VORASURF™ DC 5986 Additive		H	X		High-efficiency surfactant for use in liquid carbon-dioxide-blown/acetone- blown slabstock foams; improves efficient utilization of flame-retardant additives in FR foams
VORASURF™ DC 5987 Additive		H	X		High-efficiency surfactant for use in liquid carbon-dioxide-blown/acetone- blown slabstock foams; provides efficient utilization of FR additives and fine cell structure
VORASURF™ DC 5990 Additive		H	X		High-efficiency silicone surfactant for use with nonhalogenated flame-retardants in flexible slabstock foam production

L = Low; M = Medium; H = High

**VORASURF™ Polyurethane Additives**

Molded and High-Resilience Foam					
Product Name	TDI	TDI/MDI	MDI	Efficiency	Description
VORASURF™ SZ 1328 Additive	X	X		H	High potency surfactant for TM molded foam with surface improvement and for HR slabstock systems
VORASURF™ SZ 1346E Additive	X	X		H	High efficiency silicone surfactant for use in TDI/MDI and TDI molded
VORASURF™ DC 198 Additive			X	H	Cell stabilization in viscoelastic pillow applications
VORASURF™ DC 1990 Additive	X	X	X		Cell opener for HR molded foam
VORASURF™ DC 2525 Additive		X	X	M	Low VOC stabilizer cell-regulating surfactant for MDI and TDI/MDI molded foam systems
VORASURF™ DC 2550 Additive	X	X	X	H	Low VOC silicone surfactant for general use in flexible molded polyurethane foam
VORASURF™ DC 2584 Additive	X	X		H	Reduced emission stabilizer surfactant for TDI and TDI/MDI molded foam systems
VORASURF™ DC 2585 Additive	X	X	X	H	Reduced emission surfactant for cold-cure, flexible molded MDI molded foam and energy-absorbing NVH systems; can be used in MDI/TDI and TDI systems but requires surface stabilizer counterpart
VORASURF™ SF 274 Additive		X	X	L	Surfactant for TDI/MDI HR molded foam systems
VORASURF™ TF 3607 Additive		X	X	L	Surfactant for ester slabstock foam and TDI/MDI HR molded foam systems; surfactant for urethane elastomer foam and footwear (shoe sole) applications
VORASURF™ DC 5000 Additive					Silicone surfactant for use as an internal mold release in flexible molded foam
VORASURF™ DC 5043 Additive	X	X		M	Wide-latitude surfactant for molded and HR slabstock foam application
VORASURF™ DC 5164 Additive	X	X		H	High-efficiency, bulk stabilizing surfactant for TDI molded foam and TM systems; regularly used in combination with cell-regulating surfactants
VORASURF™ DC 5179 Additive	X	X	X	H	High-efficiency surface and cell-regulating surfactant for use in HR flexible foams
VORASURF™ DC 5258 Additive		X	X	L	Surfactant for MDI- and TDI/MDI- based flexible molded systems; produces coarse open foam
VORASURF™ DC 6070 Additive	X	X		M	Standard reduced emission surfactant for TDI molded foam systems
VORASURF™ DC 6080 Additive	X	X	X	H	High-efficiency reduced emission silicone surfactant for use in flexible molded polyurethane foam systems

L = Low; M = Medium; H = High

Shoe Sole, Microcellular and Mechanical Froth Foams					
Product Name	High-Density Shoe Sole	Low-Density Shoe Sole	Microcellular	Mechanical Froth	Description
VORASURF™ DC 193 Additive	X		X		General-purpose surfactant for rigid foam applications; surfactant for footwear (shoe sole) and integral skin applications
VORASURF™ SZ 1605 Additive	X				Surfactant for insulation panels and spray foam; surfactant for footwear (shoe sole) applications
VORASURF™ TF 1771 Additive	X	X	X		Newly engineered surfactant designed for a wide range of shoe sole applications
VORASURF™ SZ 1952 Additive				X	High efficiency. Non-hydrolysable mechanical froth foam surfactant
VORASURF™ SZ 1959 Additive				X	High efficiency. Non-hydrolysable mechanical froth foam surfactant leading to fine cells and high frothing efficiency
VORASURF™ DC 1990 Additive			X		Silicone surfactant designed for general use in microcellular foam applications
VORASURF™ SF 2937 Additive			X		General-purpose surfactant for rigid foam; surfactant for microcellular foam
VORASURF™ DC 3042 Additive	X	X	X		Bulk stabilizing surfactant for use in microcellular applications; provides uniform cell structure, good surface appearance, and improved dimensional stability
VORASURF™ DC 3043 Additive	X	X	X		Bulk stabilizing surfactant for use in all microcellular applications
VORASURF™ TF 3607 Additive	X				Surfactant for ester slabstock foam and TDI/MDI HR molded foam systems; surfactant for urethane elastomer foam and footwear (shoe sole) applications
VORASURF™ DC 5043 Additive			X		Surfactant for TDI HR molded and slabstock foam applications; surfactant for microcellular foam



**VORASURF™ Polyurethane Additives**

Rigid Foam								
Product Name	Bunstock	High-Density Molded	Pour-in-Place			Spray Foam	PIR Boardstock	Description
VORASURF™ DC 193 Additive	X	X	X	X	X	X	X	General-purpose surfactant for rigid foam applications; surfactant for footwear (shoe sole) and integral skin applications
VORASURF™ DC 197 Additive		X				X		Silicone surfactant for use in high-density rigid, molded, and spray foam
VORASURF™ SZ 1605 Additive		X	X			X		Surfactant for insulation panels and spray foam; surfactant for footwear (shoe sole) applications
VORASURF™ RF 1718 Additive				X	X	X		General surfactant for hydrocarbon and water-blown rigid foam systems
VORASURF™ TF 1771 Additive					X	X		General surfactant for all water-blown and HFC rigid foam systems
VORASURF™ RF 1777 Additive				X	X			Silicone surfactant for hydrocarbon-blown rigid foam systems
VORASURF™ SF 2936 Additive			X	X				Surfactant for cold storage and construction insulated panel systems
VORASURF™ SF 2937 Additive	X	X	X	X	X	X		General-purpose surfactant for rigid foam; surfactant for microcellular foam
VORASURF™ SF 2938 Additive			X	X	X	X	X	Surfactant for PUR/PIR insulation panels, hydrocarbon-blown appliance systems, and water-blown spray foam; suitable with bio-based polyols
VORASURF™ SF 2945 Additive			X		X			Surfactant for construction panel applications
VORASURF™ DC 5000 Additive			X					Highly efficient, cell opening surfactant for rigid polyurethane foams
VORASURF™ DC 5098 Additive	X		X					Isocyanate-compatible silicone surfactant for use in a variety of rigid foam applications
VORASURF™ DC 5103 Additive	X	X	X	X	X	X	X	General-purpose surfactant for rigid foam applications; improved product clarity and reduced melting point compared to DC 193
VORASURF™ DC 5350 Additive						X		Silicone surfactant for bulk stabilization of water-blown spray polyurethane foam
VORASURF™ DC 5357 Additive			X	X	X			Surfactant for appliance and insulation panels, including pour-in-place applications; application in HFC-blown appliance formulations"
VORASURF™ RF 5374 Additive			X	X				Surfactant for pentane-blown rigid foam systems
VORASURF™ RF 5382 Additive			X	X				Newly engineered surfactant with improved system compatibility in pentane-blown appliance formulations
VORASURF™ RF 5575 Additive				X	X	X		General surfactant for hydrocarbon and water-blown rigid foam systems
VORASURF™ DC 5585 Additive							X	Silicone surfactant for polyisocyanurate foam systems, including flexible faced applications
VORASURF™ DC 5588 Additive	X				X			High-efficiency silicone surfactant for rigid lamination and bunstock foam
VORASURF™ DC 5604 Additive	X	X	X	X	X	X	X	General-purpose rigid foam surfactant for use in polyurethane and polyisocyanurate foams; gives enhanced aesthetics to pentane-blown appliance applications

Polyester Foam	
Product Name	Description
VORASURF™ DC 1990 Additive	Surfactant for polyester flexible slabstock foam applications with low emission requirements; can be used in flexible molded foam for cell opening and for rigid foam applications
VORASURF™ TF 3607 Additive	Surfactant for ester slabstock foam and TDI/MDI HR molded foam systems; surfactant for urethane elastomer foam and footwear (shoe sole) applications
VORASURF™ FF 5526 Additive	Surfactant for polyester slabstock foam

### Global resources and local support

Dow has an extensive network of sales, application engineering, product development, manufacturing, and delivery capabilities around the globe. You can depend on us for a readily available supply of consistent, high-quality silicone surfactants and technical support when and where you need it.

The Dow brand has earned a reputation for quality, consistency, and dependability in dozens of industries around the globe. This includes many of the industries you serve, such as: construction, transportation, textiles, appliances, consumer goods, electronics and packaging.

For product information, samples, and sales or technical support, visit [pu-surfactants.com](http://pu-surfactants.com)



Learn how much we can do to help you create polyurethane foam products that perform better, smarter, safer and more efficiently at [pu-surfactants.com](http://pu-surfactants.com).

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