



Personal Care Products

SILTECH PRODUCTS FOR PERSONAL CARE



Since its inception in 1989, Siltech has been actively developing materials for use in the personal care market. During this time silicone compounds have become an increasingly important segment of products for creating innovative new technologies.

As formulations and products become more advanced, the understanding of the underlying properties of the increasing number of organo-functional silicones has become more difficult. While sophisticated silicones are used to improve various functional attributes such as wetting, foaming, conditioning, emulsification, film formation, tactile modification, gloss, dispersing and several others, selecting the correct silicones can be daunting. To address this problem Siltech has developed a system called Select-a-Sil®. It is based upon the principle that in order to be functional, silicone compounds must be Formulator Friendly®.

Selecting the proper silicone for a particular formulation starts with identifying the specific attributes that are desired. Once the attributes are defined, other formulation issues such as solvent type, concentrations and interaction between ingredients need to be determined. In order to facilitate these selections, Siltech has developed a number of "kits" that allow for rapid screening of silicones by application. Specifically, kits for wetting and emulsification allow the user to quickly screen the effects of a given material in the finished formulation.

Siltech offers a line of standard personal care products, along with many formulations and technical presentations. Additionally, our chemists work jointly with customers developing specific molecules and products for individual applications. We also address customer problems that can only be solved by exploring new technologies. Such cooperative agreements have proven very useful in developing many new and innovative cosmetic applications.

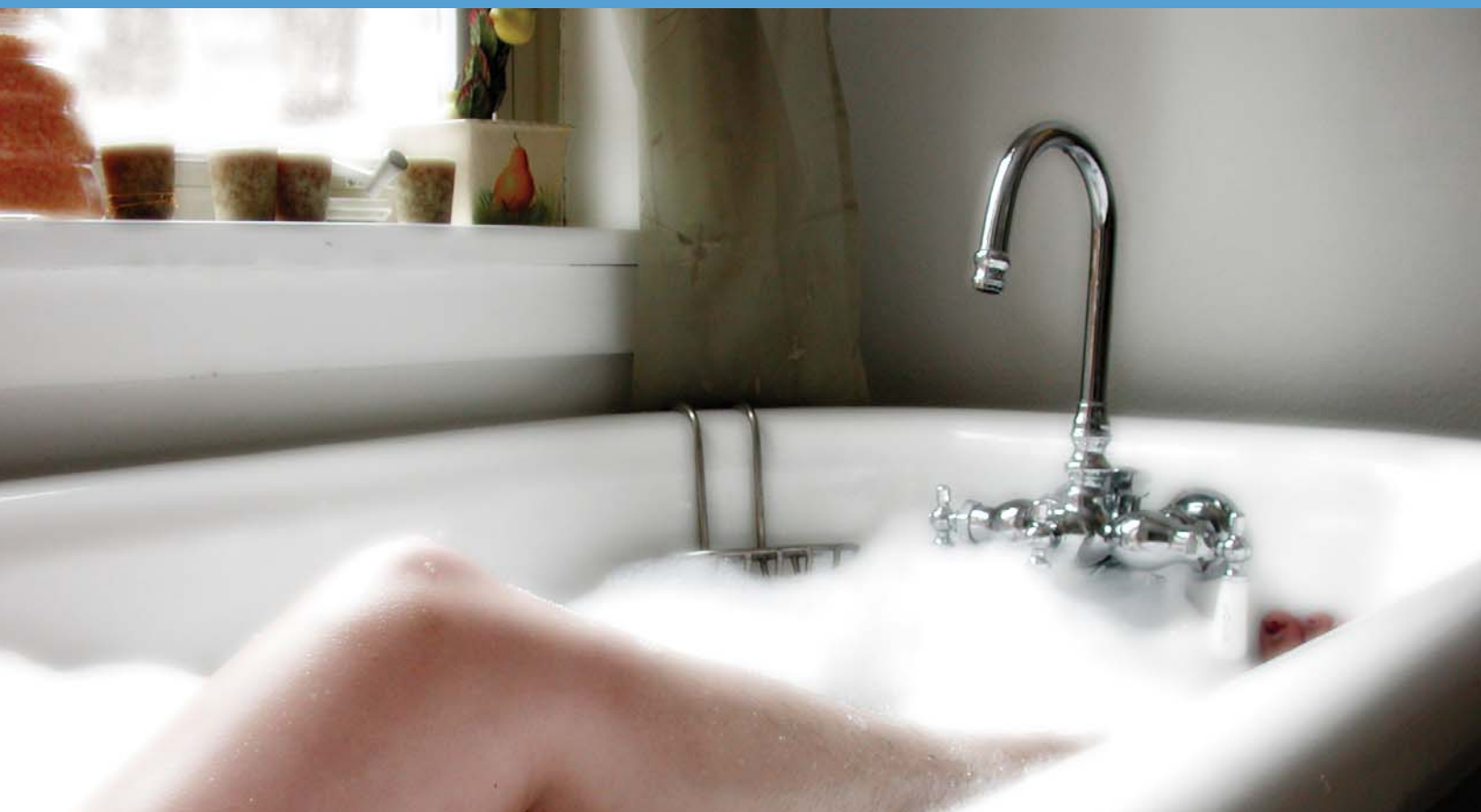
As silicones continue to play an increasing role in the formulation of new and novel personal care products, Siltech remains committed to lead the development of unique and sophisticated products for this growing industry.



DESCRIPTION	PRODUCT	CHEMICAL DESCRIPTION	INCI NAME	PHYSICAL FORM & VISCOSITY OR MELT POINT	SOLUBILITY @ 1%/10%						COMMENTS
					Water	Mineral Oil	Isopropyl Alcohol	Isopropyl Myristate	Dimethicone Fluid 350 cps	Cyclo-methicone	
DIMETHICONE COPOLYOL											
Dimethicone copolyols are a class of silicone compounds with enhanced water solubilities. This attribute is achieved by introducing polyethylene glycol (PEG) and polypropylene glycol (PPG) groups onto the silicone backbone. The proper selection of the silicone backbone, and the ratio of PEG/PPG allow for formulation optimization. Products range from water soluble to water dispersible.	Silurf D212-CG	Silicone polyether	PEG-12 Dimethicone	Clear liquid, 320 cps	S/S	I/I	S/S	D/I	D/D	I/I	Low odour water soluble silicone. Provides transient conditioning while reducing skin irritation of surfactants.
	Silurf J208	Silicone polyether	PEG-8 Dimethicone	Clear liquid, 600 cps	S/S	I/I	S/S	D/I	D/D	I/I	High molecular weight water soluble silicone. Provides good conditioning and skin feel. Recommended for body wash applications.
	Silwax WD-IS	Silicone isostearate	PEG-7 Dimethicone Isostearate	Clear liquid, 200 cps	D/D	S/S	S/S	D/I	D/D	D/I	Water dispersible silicone ester. Provides lubricity, improved wet comb and conditioning. Recommended for hair care and body wash applications.
ALKYL DIMETHICONE											
Alkyl dimethicone compounds are designed for enhanced oil solubility and to change the feel and aesthetics of personal care products. This is achieved by incorporating oil soluble alkyl and/or aryl groups. The higher the molecular weight and the greater the number of alkyl groups the higher the melt point and the wax's hardness. The aryl groups increase refractive index and, consequently, gloss.	Silwax B116	Alkyl polydimethylsiloxane	Cetyl Dimethicone	Clear liquid, 25 cps	I/I	S/S	I/I	S/S	I/I	S/S	Recommended for sun and skin care. Low viscosity product used in pigment grinds and to boost SPF in sun care products.
	Silwax H416	Alkyl polydimethylsiloxane	Cetyl Dimethicone	Clear liquid, 110 cps	I/I	S/S	I/I	S/S	I/I	S/S	Higher viscosity version of Silwax B116, with longer play time and more elegant feel. Liquid at ambient temperature.
	Silwax D222	Alkyl polydimethylsiloxane	Behenyl Dimethicone	Soft wax, 37°C	I/I	S/I	I/I	I/I	I/I	I/I	Used to minimize syneresis and to modify the melt point of pigmented products. Provides an elegant feel.
	Silwax J1032	Alkyl polydimethylsiloxane	C-32 Alkyl Dimethicone	Hard wax, 60°C	I/I	S/S	I/I	I/I	I/I	S/D	Used to minimize syneresis and to modify the melt point of pigmented products. Provides an elegant feel.
	Silwax Di-5026	Alkyl polydimethylsiloxane	Cerotyl Dimethicone	Soft wax, 30°C	I/I	S/S	S/I	S/S	S/I	S/S	Provides improved cushion, barrier properties and long lasting moisturization and reduced trans-epidermal water loss in skin care products. Improves pigment dispersion in colour cosmetic products.
	Silwax 3H-MS Silwax D0-MS	Aryl polydimethylsiloxane	Isopropyl Phenyl Dimethicone	Clear liquid, 8000 cps Clear liquid, 100 cps	I/I	S/S	S/S	S/S	S/D	S/D	Provides gloss and lubricity to hair and skin. Silwax 3H-MS gives the highest lubricity and gloss.
EMULSIFIERS											
Siltech's silicone emulsifiers are alkyl dimethicone copolyol compounds. As such they contain both alkyl groups and PEG groups on the silicone backbone. The ratio of the alkyl to water soluble group determines the type of emulsion obtained. These materials are of great interest in making invert emulsions (water in oil). Typical uses include sun care products, pigmented products and other skin care products.	Silube J208-212	Silicone alkyl polyether	Lauryl PEG-8 Dimethicone	Clear liquid, 1000 cps	S/S	I/I	S/S	I/I	I/I	I/I	Silicone emulsifier HLB = 9 (oil in water emulsifier)
	Silube J208-412	Silicone alkyl polyether	Lauryl PEG-8 Dimethicone	Clear liquid, 800 cps	D/D	I/I	S/S	I/I	I/I	I/I	Silicone emulsifier HLB = 7 (oil in water emulsifier)
	Silube J208-612	Silicone alkyl polyether	Lauryl PEG-8 Dimethicone	Clear liquid, 600 cps	I/I	I/I	S/S	S/S	I/I	I/I	Silicone emulsifier HLB = 5 (water in ester emulsifier)
	Silube J208-812	Silicone alkyl polyether	Lauryl PEG-8 Dimethicone	Clear liquid, 300 cps	I/I	S/S	S/D	S/S	I/I	D/I	Silicone emulsifier HLB = 3 (water in oil emulsifier)
	Silurf 400R	Silicone polyether	Cyclopentasiloxane (and) PEG/PPG-18/18 Dimethicone	Clear liquid, 5000 cps	I/I	I/I	S/S	S/S	S/D	S/S	Silicone delivery system for emollients, moisturizers, sunscreens and pigments. 10% active in cyclopentasiloxane.
ANIONIC SILICONE											
The incorporation of anionic groups onto the silicone backbone creates a new class of surfactants that provide ultra-mild detergency.	Silube CS-1	Polymethylsiloxane succinate	Dimethicone PEG-8 Succinate	Clear liquid, 3000 cps	S/S	I/I	S/S	I/I	D/I	I/I	Anionic silicone surfactant for low irritation skin cleansers. Can also be complexed with cationic surfactants.
CATIONIC SILICONE											
Adding a cationic group onto the silicone backbone results in improved skin and hair substantivity, which thereby improves wet and dry comb properties and conditioning. The presence of the silicone and fatty group on a cationic silicone results in outstanding skin feel, making these materials additives for body washes.	Silquat AD	Silicone dimeramido quat	Silicone Quaternium-8	Clear liquid, 30 cps	S/S	I/I	S/S	I/I	D/I	I/I	Adds conditioning and manageability to shampoos and softness to body washes. Does not adversely affect foam. 40% active in water.
	Silquat J208-1B	Quaternary silicone polyether	PEG-8 Distearmonium Chloride PG-Dimethicone	Clear liquid, 300 cps	S/S	I/I	S/S	I/I	I/I	I/I	Water soluble hair conditioner. Provides outstanding slip and wet comb as well as good dry conditioning.
CATIONIC/ANIONIC COMPLEX											
The complexing of anionic and cationic silicones results in a new class of compounds that allows for increased deposition on hair and skin. The large size of the resulting salt makes the deposition on hair and skin energetically favourable. This deposition allows for advanced conditioning in shampoos and body washes at levels of between 0.5 and 0.8% by weight. The complex provides outstanding dry conditioning similar to silicone fluids, but can be used in clear systems.	SilPlex J2-S	Cationic/anionic silicone complex	Silicone Quaternium-20	Clear liquid, 500 cps	S/S	I/I	S/S	I/I	D/I	I/I	Extremely effective wet and dry comb conditioner. Water soluble, anionic compatible. Very low eye and skin irritation.
FLUORO SILICONE											
The inclusion of fluoro moieties onto the silicone backbone results in improved slip, spreadability and skin feel. These materials are of great interest in making pigmented products: they coat the pigment and thereby allow for a uniform film upon application. Fluoro silicones are also used in lipstick top-coat products.	Fluorosil J15	Fluorinated polydimethylsiloxane	Perfluorononyl Dimethicone	Clear liquid, 500 cps	I/I	I/I	D/D	S/S	S/S	S/S	Fluorinated silicone. Superior slip and lubricity in skin care and pigmented product applications.
	Fluorosil L118	Fluorinated and alkylated polydimethylsiloxane	Perfluorononyl Stearyl Dimethicone	Off-white lubricous paste, 30°C	I/I	S/S	I/I	S/S	D/I	D/I	Fluorinated alkyl silicone. Superior slip and lubricity for use in pigmented product applications. Melt point modifier.
WETTING AGENTS											
Silicone wetting agents are a specific class of dimethicone copolyols chosen to provide outstanding Draves wetting when added to aqueous formulations at between 0.2 and 0.6% by weight. This improves the product's spreadability and aesthetics.	Silurf A208 Silurf B208 Silurf C208	Silicone polyether	PEG-8 Dimethicone	Clear liquid, 90 cps Clear liquid, 150 cps Clear liquid, 200 cps	S/S	I/I	S/S	D/I	D/D	I/I	This series of PEG-8 Dimethicone compounds are designed to provide outstanding Draves Wetting for skin and hair care products.
RESINS											
Silicone resins are formed by cross-linking various silicone compounds. The resulting materials are either elastomers or resins depending upon the degree of cross-linking. Materials with a low degree of cross-linking provide a dry powdery feel on the skin and absorb sebum. Higher degrees of cross-linking form rubbery films.	Silube R-5580 Silube R-5550 Silube R-5525	Silicone resin	Dimethicone	Clear liquid, 5000 cps Clear liquid, 1000 cps Clear liquid, 350 cps	I/I	I/I	S/S	S/S	S/S	S/S	A series of silicone resins, with different viscosities, designed to provide a powdery skin feel.

SILTECH PRODUCT SELECTION GUIDE

SHAMPOOS & CONDITIONERS	CONDITIONING	WET COMB	DRY COMB	SOFTNESS	ANTI-STAT
	Silsurf J208	Silwax WD-IS	SilPlex J2-S	Silsurf J208	Silquat J208-1B
	Silsurf C208	Silsurf A208		Silsurf D212-CG	SilPlex J2-S
	SilPlex J2-S	SilPlex J2-S		Silwax WD-IS	
	Silsurf D212-CG			SilPlex J2-S	
	Silquat AD				
SUN CARE	OIL IN WATER EMULSIFIER	WATER IN OIL EMULSIFIER	PIGMENT DISPERSANT/SPF ENHANCER	GLOSS ADDITIVE	SOFT FEEL
	Silube J208-212	Silube J208-612	Silwax B116	Silwax D0-MS	Fluorosil L118
	Silube J208-412	Silube J208-812	Silwax H416	Silwax 3H-MS	Silwax Di-5026
CREAMS & LOTIONS	SOFTNESS	BARRIER PROPERTIES	SLIP	WETTING	PROCESSING AID
	Silwax WD-IS	Silube R-5580	Fluorosil L118	Silsurf A208	Silsurf 400R
	Silquat J208-1B	Silube R-5550		Silsurf B208	
		Silube R-5520		Silsurf C208	
LIPSTICK	PIGMENT DISPERSANT	CUSHION	LONG WEAR	MELT POINT MODIFIER	GLOSS ADDITIVE
	Silwax B116	Fluorosil J15	Silube R-5580	Silwax J1032	Silwax D0-MS
	Silwax H416	Fluorosil L118	Silube R-5550	Silwax D222	Silwax 3H-MS
	Silwax Di-5026		Silube R-5525		
BODY WASH	SLIP	DETERGENCY	CONDITIONING	WETTING	SOFTNESS
	Silwax WD-IS	Silube CS-1	SilPlex J2-S	Silsurf A208	Silquat AD
			Silquat J208-1B	Silsurf B208	SilPlex J2-S
			Silsurf J208	Silsurf C208	
			Silquat AD		



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