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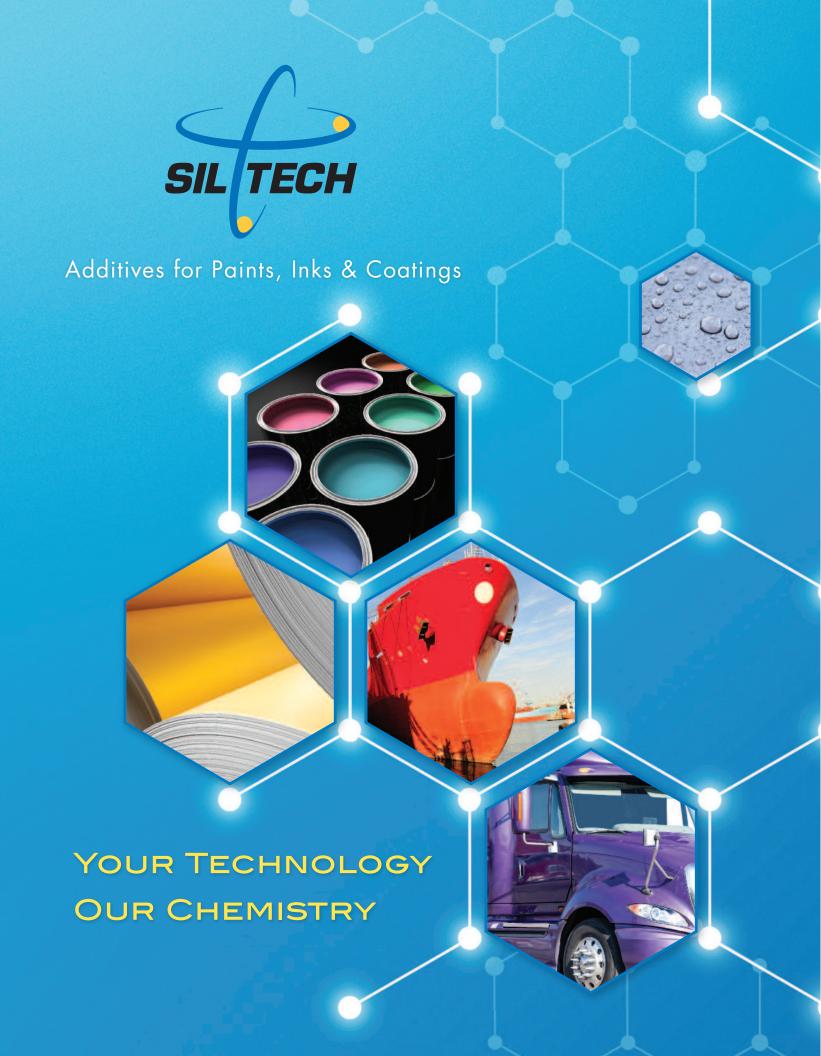




Mississauga, Ontario, Canada Plant



June/2018





Innovative Silicones for the Paints, Inks and Coatings Industry

Silicone additives have long been recognized for providing special properties to inks and coatings, including improved slip, mar resistance, leveling and foam control. Furthermore, because silicones are effective at very low concentrations, they are widely used to optimize both product properties and processes.

Siltech's additives now offer formulators of paints, inks and coatings a wide range of silicone products to eliminate manufacturing problems and to enhance the final product's performance. All Siltech products are manufactured to the highest standards to ensure that they meet our customers' needs. Siltech also offers the flexibility of providing many of these products in either an appropriate solvent or in neat form. These products are designed to meet the specific requirements of various coating systems such as solvent, water, solventless, or energy-curing.

Siltech's additives cover the following functional classes: wetting agents; slip, mar, gloss, flow and leveling additives; and foam control.

In many coatings segments, it is possible to permanently achieve these properties by bonding a reactive silicone into the resin. Siltech has a complete line of these reactive additives. These include various silicone acrylates, called Silmer ACR, as well as epoxy, amino, hydroxyl and other functional silicones.

This brochure is designed to enable formulators to select the right additives for their specific system needs. It is organized to provide user-friendly information, including key properties and benefits, typical applications, coatings systems and recommended dosage.

In addition to the products offered in this brochure, Siltech welcomes the opportunity to work with customers to develop unique silicones for their specific applications.



About Siltech - Siltech develops, manufactures and markets a full line of organo-functional silicone compounds and related specialties for a wide range of industrial applications, using both our patented and proprietary technology. With more than 25 years of experience, we draw upon an expertise that includes organo-modified silicone surfactants and silicone polymers. Siltech currently serves customers in the inks and coatings, personal care, polyurethane foam, textile, automotive, pulp & paper, plastics, oil & gas, agriculture, mold making and many other markets.

SYSTEM	SLIP	FOAM CONTROL	MAR RESISTANCE	FLOW	GLOSS	OF BERNARD CELLS
Water Borne	Siltech C-39 Siltech C-42 Siltech C-241 Siltech C-418 Siltech C-418 Siltech C-442 Siltech C-442 Siltech C-608 Siltech C-608 Siltech C-608 Siltech C-816 Siltech C-2157 Siltech C-22 Siltech C-101 Siltech C-22 Siltech C-22 Siltech E-2155 Siltech E-2155 Siltech E-2155	Siltech C-4660 Siltech C-4714 Siltech C-4726 Siltech C-4760 Siltech C-4830 Siltech C-4930 Siltech C-293 Siltech C-22 Siltech C-39 Siltech C-204 Siltech C-228 Siltech C-404	Siltech C-39 Siltech C-241 Siltech C-418 Siltech C-441 Siltech C-448 Siltech C-608 Siltech C-816 Siltech C-2157 Siltech C-22 Siltech C-42 Siltech C-42 Siltech C-101 Siltech C-228 Siltech C-241 Siltech C-259 Siltech C-259 Siltech C-268 Siltech C-468 Siltech E-2155 Siltech E-8010	Silsurf A004-UP Silsurf A008-UP Siltech C-42 Siltech C-101 Siltech C-204 Siltech C-400 Siltech C-404 Siltech C-241 Siltech C-241 Siltech C-468 Siltech C-608	Siltech C-42 Siltech C-101 Siltech C-442	Siltech C-228 Siltech C-241 Siltech C-441 Siltech C-442
Solvent Borne	Siltech C-39 Siltech C-173 Siltech C-173 Siltech C-216 Siltech C-241 Siltech C-418 Siltech C-441 Siltech C-442 Siltech C-448 Siltech C-468 Siltech C-468 Siltech C-642 Siltech C-753 Siltech C-753 Siltech C-816 Fluorosil OH ACR C7-F Siltech C-32 Siltech C-32 Siltech C-32 Siltech C-32 Siltech C-101 Siltech C-228 Siltech C-228 Siltech C-228 Siltech C-259 Siltech C-428 Siltech C-754	Siltech C-4100 Siltech C-4800 Fluorosil TFP 1000 Siltech C-32 Siltech C-32 Siltech C-39 Siltech C-204 Siltech C-228 Siltech C-428	Siltech C-22 Siltech C-39 Siltech C-216 Siltech C-216 Siltech C-241 Siltech C-418 Siltech C-441 Siltech C-442 Siltech C-442 Siltech C-642 Siltech C-642 Siltech C-642 Siltech C-754 Siltech C-816 Fluorosil OH C7-F Silmer OHT C50 Fluorosil OH ACR C7-F Silmer OH ACR D60 Silmer OHT D50 Silmer OHT D10 Siltech C-32 Siltech C-32 Siltech C-42 Siltech C-101 Siltech C-259 Siltech C-428 Siltech C-428 Siltech C-488 Siltech C-7014	Siltech C-32 Siltech C-42 Siltech C-101 Siltech C-173 Siltech C-176 Siltech C-176 Siltech C-228 Siltech C-259 Siltech C-400 Siltech C-401 Siltech C-216 Siltech C-216 Siltech C-241 Siltech C-441 Siltech C-468	Siltech C-32 Siltech C-42 Siltech C-101 Siltech C-173 Siltech C-176 Siltech C-176 Siltech C-216 Siltech C-259 Siltech C-442 Siltech C-753 Siltech C-7014	ction
Solvent Free	Siltech C-42 Siltech C-442 Siltech C-442 Siltech C-816 Silmer OHT C50 Silmer OHT Di-10 Silmer OHT Di-50 Silmer OHT Di-400 Siltech C-22 Siltech C-32 Siltech C-101 Siltech C-172 Siltech C-7014	Siltech C-32	Siltech C-442 Siltech C-816 Siltech C-22 Siltech C-32 Siltech C-42 Siltech C-101 Siltech C-259 Siltech C-7014	Siltech C-32 Siltech C-42 Siltech C-101 Siltech C-172 Siltech C-7014 Siltech C-442	Siltech C-32 Siltech C-42 Siltech C-101 Siltech C-7014 Siltech C-172 Siltech C-642	Siltech C-172
Radiation Cure	Siltech C-38 Siltech C-39 Siltech C-39 Siltech C-42 Siltech C-241 Siltech C-418 Siltech C-441 Siltech C-442 Siltech C-448 Siltech C-468 Siltech C-816 Siltech C-916	Siltech C-22 Siltech C-32 Siltech C-39 Siltech C-608 Silmer ACR Di-10 Silmer ACR Di-50 Silmer ACR Di-100	Siltech C-22 Siltech C-38 Siltech C-39 Siltech C-42 Siltech C-42 Siltech C-418 Siltech C-418 Siltech C-441 Siltech C-448 Siltech C-816 Silmer ACR Di-1508 Silmer ACR Di-2510 Silmer ACR Di-2510 Silmer ACR Di-4515-O Fluorosil OH C7-F Fluorosil OH ACR C7-F Silmer OH ACR Di-10 Silmer OH ACR Di-10 Silmer OH ACR Di-10 Silmer OH ACR Di-100 Silmer OH ACR Di-400 Siltech C-101 Siltech C-216 Siltech C-259 Siltech C-442 Siltech C-7014	Siltech C-42 Siltech C-101 Siltech C-259 Siltech C-7014 Siltech C-241 Siltech C-400 Siltech C-441 Siltech C-442 Siltech C-468	Siltech C-42 Siltech C-101 Siltech C-7014 Siltech C-259 Siltech C-442	econdary Function

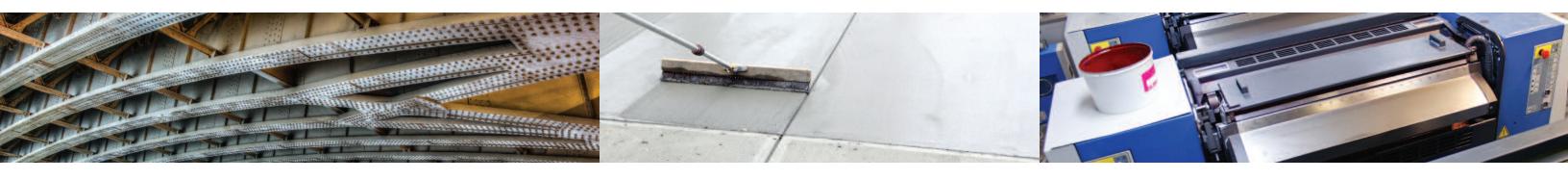
FOAM

LEVELING,

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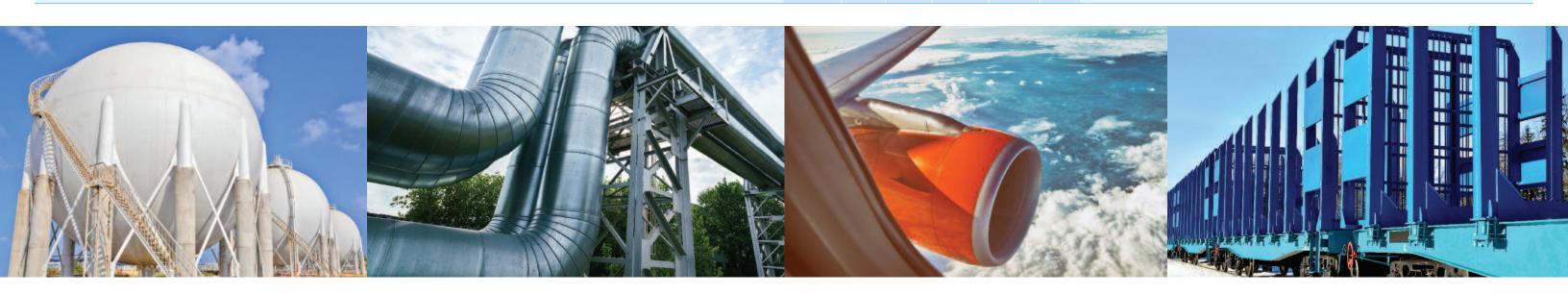
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PRODUCT	DESCRIPTION	SOLID %	SOLVENT	VISCOSITY 25°C, CST	DILUENTS	SYSTEM S/W/UV	FDA COMPLIANCE	Dosage %	Slip	Foam Mar Control Resistance	Leveling Wetting Flow	COMMENTS	Shelf Life months from date of manufacture
Siltech C-441	Silicone polyether copolymer	100	None	1,500-3,000	Water, polar solvents, butyl glycol, butyl acetate	S/W/UV	175.105 176.210	0.05-1.00	00	OO	Θ	Used in solvent-borne, water-based and energy-curing coatings and ink formulations to eliminate cratering and to improve slip, anti-blocking and flow. It also provides excellent mar resistance.	s 36
Siltech C-241	Silicone polyether copolymer	95	Diethylene glycol monobutyl ether	1,200-1,600	Polar solvents, butyl glycol, butyl acetate, aromatic solvents	S/W/UV	175.105 176.210	0.10-1.00	00	00	0	Used in solvent-borne, water-based and energy-curing coatings and ink formulations to eliminate cratering, improve slip and flow. Also provides mar resistance.	s 36
Silmer ACR D208 Silmer ACR Di-1508 Silmer ACR Di-2510 Silmer ACR Di-4515-O	Silicone acrylate polyether	100	None	300-1,000 100-500 100-500 1,000-3,000	Water and aromatic solvents	UV		0.10-3.00	O O	00		Can be reacted into acrylate polymers for coatings, plastics and resins to incorporate a silicone moiety into the polymer structure to give better slip, anti-blocking, mar resistance, surface smoothness and flexibility. These same benefits can also be incorporated into UV and EB curing systems.	24
Silmer OHT Di-10 Silmer OHT Di-50 Silmer OHT Di-100 Silmer OHT Di-400	Di-hydroxyalkyl silicone fluid	100	None	200 300 500 7,000	Alcohols	S	No	0.2-3.00	$\Theta\Theta$	$\oplus \oplus$		Hydroxyalkyl modified silicones with two hydroxyl groups on each terminal end. Very effective for anti-graffiti in urethane coatings. Provides superior slip, mar resistance and release properties.	36
Silmer OH ACR Di-10 Silmer OH ACR Di-50 Silmer OH ACR Di-100 Silmer OH ACR Di-400 Silmer OH ACR D4 Silmer OH ACR D60	Silicone acrylate	100	None	120 200 300 1,500 500 2,000	Aromatic and aliphatic solvents	S	No	0.2-3.00	OO	$\oplus \oplus$		Can be reacted into acrylate polymers for coatings, plastics and resins to incorporate a silicone moiety into the polymer structure to give better slip, anti-blocking, mar resistance, surface smoothness and flexibility. These same benefits can also be incorporated into UV and EB cured systems.	24 24 24 24 12



Siltech C-753	Carbinol-functional siloxane	100	None	500-1,000	Aromatic solvents, esters, ketones and glycol ethers	S/UV		0.50-3.00	$\Theta\Theta$	$\Theta\Theta$			Hydroxyl functional silicone. Imparts permanent marker resistance, anti-graffiti and anti-stain properties while also improving release. Applications include two-part coatings based on acrylic polyol/isocyanate, polyester polyol/isocyanate, melamine chemistry and acrylic-epoxy coatings.	36
Siltech C-4445	Silicone gum dispersion	80	None	1,000,000- 2,000,000	Water	W/S	No	0.5-3.00	OO	00			Additive for both water-based as well as solvent-borne coating systems providing excellent slip, mar resistance, gloss, anti-blocking and release effects.	24
Siltech C-442	Silicone polyether copolymer	100	None	1,500-3,500	Polar solvents, butyl glycol, butyl acetate, xylene	S/W/UV		0.05-1.00	OO	00	0	Θ	Used in solvent-borne, water-based and energy-curing coatings and ink formulations to eliminate cratering, improve slip, gloss and flow. Also provides mar resistance.	36
Siltech C-642	Silicone trimethylolpropane ester	100	None	300-700	Aromatic solvents, mineral spirits, isopropyl alcohol	S		0.05-1.00	OO	00		Θ	Reduces coefficient of friction, improves slip, gloss, mar and stain resistance to coated surfaces. Is primarily used where high thermal and oxidative stability is required.	36
Fluorosil OH C7-F	Fluoroalkyl and alkylcarbinol silicone	100	None	80-100	Aromatic and aliphatic solvents	S/UV	No	0.2-5.00	Θ	00			Fluorinated silicone carbinol that can be reacted into solvent-borne urethane systems to improve fingerprint and stain resistance, slip, mar resistance and softness.	36
Fluorosil OH ACR C7-F	Fluorosilicone acrylate	100	None	250	Aromatic and aliphatic solvents	UV	No	0.05-0.50	$\Theta\Theta$	00			Fluorinated silicone acrylate for use in UV cured systems to improve fingerprint and stain resistance, slip, mar resistance and softness.	12
Silmer OHT C50	Multi-hydroxyalkyl silicone fluid	100	None	900	Alcohols	S	No	0.2-3.00	PP	00			Hydroxyalkyl modified silicone with six hydroxyl groups on each terminal end. Very effective for anti-graffiti in urethane coatings. Provides superior slip, mar resistance and release properties.	36

PRODUCT	DESCRIPTION	SOLID %	SOLVENT	VISCOSITY 25°C, CST	DILUENTS	SYSTEM S/W/UV	FDA COMPLIANCE	Dosage %	Slip	Foam Control	Mar Resistance	Leveling, Wetting Flow	Gloss	COMMENTS	Shelf Life months from date of manufacture
Siltech C-608	Silicone polyether copolymer	100	None	500-1,000	Aromatic solvents, butyl cellosolve, polar solvents	S/W/UV	175.105 176.210 176.170	0.05-0.50	$\Theta\Theta$	($\Theta\Theta$	Θ		A non-foaming slip and mar resistance additive for waterborne systems. Good wetting properties.	36
Siltech C-39	Silicone polyether copolymer	100	None	600-1,500	Ketones, polar solvents, aromatic solvents, methylene chloride	S/W/UV	175.105 176.170 177.1520	0.10-1.50	$\Theta\Theta$	Θ	$\Theta\Theta$			Provides slip and mar resistance in solvent, UV and EB cured coatings. Provides foam control in water-based systems.	36
Siltech C-42	Silicone polyether copolymer	100	None	300-600	Water (dispersible), polar solvents, acetone, toluene	S/W	175.105 176.210 176.170	0.05-2.00	OO		0	00	Θ	Improves leveling, gloss, flow-out, wetting. Improves mar resistance.	36
Siltech C-418	Silicone polyether copolymer	100	None	3,500	Water, polar solvents, butyl glycol, butyl acetate	S/W/UV	CFR 176.210	0.01-1.00	00		OO			Used in solvent-borne, water-based and energy-curing coatings and ink formulations to eliminate cratering and to improve slip and anti-blocking. It also provides excellent mar resistance.	36



Siltech C-448	Silicone polyether copolymer	100	None	12,000	Water, polar solvents, butyl glycol, butyl acetate	S/W/UV		0.01-1.00		$\Theta\Theta$		Used in solvent-borne, water-based and energy-curing coatings and ink formulations to eliminate cratering and to improve slip and anti-blocking. It also provides excellent mar resistance.	36
Siltech C-468	Silicone polyether copolymer	100	None	400-800	Water, polar solvents, butyl glycol, butyl acetate	S/W/UV	FCN-1365	0.05-1.00	$\Theta\Theta$	Θ	Θ	Used in solvent-borne, water-based, energy-curing coatings and inks to eliminate cratering and to improve slip, anti-blocking and flow. Also provides mar resistance and offers good re-coatability.	36
Siltech C-216	Silicone polyether copolymer	10	Toluene	2-5	Aromatic and aliphatic solvents	S	No	0.10-1.50	00	0	(Improves slip, mar resistance, and leveling. For solvent-borne systems.	36
Siltech C-816	Silicone alkyl polyether	100	None	1,200-1,700	Water, polar solvents	S/W		0.05-1.50	$\Theta\Theta$	Θ		Provides stain resistance to waterborne coatings.	36
Siltech E-2155	30% active emulsion of a medium viscosity cross-linking amino silicone	30	None	10	Water	W	No	0.05-5.00	Θ	0		Film forming silicone emulsion. Provides excellent durability and gloss to tire shines, furniture polishes and hard surface cleaners. Provides a coating as is or improves hydrophobicity, release and dirt pickup in water-based coatings.	12
Siltech E-21 <i>57</i>	A 30% active emulsion of a highly cross-linked amino silicone	30	None	10	Water	W	No	0.5-5.00	$\Theta\Theta$	$\Theta\Theta$		Film forming silicone emulsion. Provides excellent durability and gloss to tire shines, furniture polishes and hard surface cleaners. Provides a coating as is or improves hydrophobicity, release and dirt pickup in water-based coatings.	12
Siltech E-8010	Crosslinking silicone emulsion with anionic emulsifiers	53	None	30	Water	W	No	0.05-5.00	Θ	Θ		Film forming silicone that provides excellent durability, water repellancy, and release properties to many surfaces including concrete, roofing, rubber, countertops, etc. Can be used as is or in diluted concentrations.	12

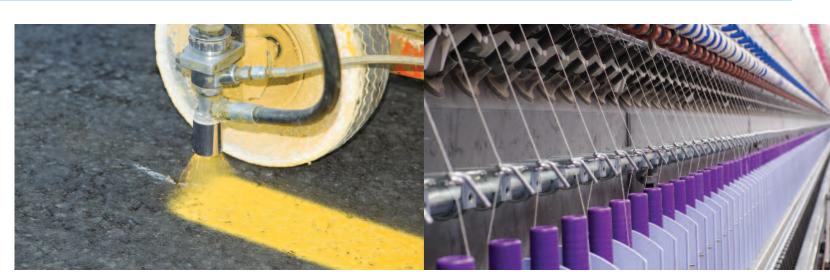
PRODUCT	DESCRIPTION	SOLID %	SOLVENT	VISCOSITY 25°C, CST	DILUENTS	SYSTEM S/W/UV	FDA COMPLIANCE	Dosage %	Slip	Foam Control	Mar Resistance	Leveling, Wetting Flow		COMMENTS	Shelf Life months from date of manufacture
Siltech C-754	Organo-modified silicone	100	None	2,000-3,000	Aromatic solvents, esters, ketones and glycol ethers	S/W	No	0.50-3.00	Θ		O O			Reactive silicone used for solvent-borne cross-linkable top coats where it imparts marker resistance, anti-graffiti and anti-stain properties while also improving release Applications include two-part coatings based on acrylic polyol/isocyanate, polyester polyol/isocyanate, melamine chemistry and acrylic-epoxy coatings.	э. 36
Silsurf A004-UP Silsurf A008-UP	Silicone polyether copolymer	100	None	20-50 50-100	Polar solvents, aromatic solvents, butyl cellosolve	S/W/UV	No	0.10-0.50			00	$\Theta\Theta$		Superior wetting and spreading properties for all coating systems.	36
Siltech C-7014	Silanol-functional	100	None	13-15	Aromatic, aliphatic and chlorinated solvents	S	No	0.10-1.00	Θ		Θ	$\Theta\Theta$	Θ	Improves leveling and anti-cratering and reduces orange peel. Prevents pigment floating and provides mar resistance in solvent-borne systems.	36
Siltech C-428	Silicone alkyl polyether	100	None	300-800	Aromatic solvents, polar solvents, butyl cellosolve	S		0.05-0.25	Θ	Θ	\oplus	OO		Leveling additive for solvent-borne systems. Defoaming properties. Prevents formation of Bernard cells. Increases surface slip and scratch and mar resistance.	36
Siltech C-228	Siltech C-428 in ethylene glycol monobutyl ether	50	Ethylene glycol monobutyl ether	200-500	Aromatic solvents, polar solvents, butyl cellosolve	S/W		0.10-0.50	0	0	(00		Leveling additive for solvent-borne and waterborne systems. Defoaming properties. Increases surface slip and scratch and mar resistance. Prevents formation of Bernard cells.	36



Siltech C-404	Silicone polyether copolymer	100	None	75-200	Dipropylene glycol monomethylether	W	175.105 176.170 177.1520	0.05-0.50		Θ		00		Re-coatable additive for wetting and leveling in waterborne systems. Does not stabilize foam.	36
Siltech C-204	Siltech C-404 in dipropylene glycol monomethylether	52	Dipropylene glycol monomethylether	10-50	Dipropylene glycol monomethylether	S/W	176.170 177.1520	0.10-1.00		0		00		Re-coatable additive for wetting and leveling in waterborne systems. Does not stabilize foam.	36
Siltech C-172	Silicone polyether copolymer	100	None	500-1,500	Xylene, isobutanol, butyl glycol, polar solvents	S/W	175.105 176.210	0.10-0.50	Θ		0	00	Θ	Increases surface slip and improves leveling and gloss. Improves wetting and provides anti-blocking benefits. Prevents formation of Bernard cells.	36
Siltech C-173	Siltech C-172 in butyl cellosolve	52	Butyl cellosolve	25-100	Xylene, isobutanol, butyl glycol	S/W	175.105 176.210	0.20-1.00	0		Θ	00	Θ	Increases surface slip and improves leveling and gloss. Improves wetting and provides anti-blocking benefits. Prevents formation of Bernard cells.	36
Siltech C-174	Siltech C-172 in xylene and isobutanol	52	Xylene and isobutanol	10-40	Xylene, isobutanol, butyl glycol	S	175.105 176.210	0.20-1.00	Θ		0	00	Θ	Increases surface slip and improves leveling and gloss. Improves wetting and provides anti-blocking benefits. Prevents formation of Bernard cells.	36
Siltech C-176	Silicone polyether copolymer	13	Xylene & monophenol glycol ether	2-5	Aromatic solvents	S	175.105 176.210	0.10-0.50	Θ		Θ	OO	Θ	For solvent-borne systems to give wetting. Improves slip, anti-blocking and gloss.	24
Siltech C-32	Silicone alkyl aryl fluid	100	None	800-1,500	Aromatic solvents, mineral spirits, chlorinated hydrocarbons	S	No	0.05-1.00	(0	(PP	Θ	Additive for solvent and solventless systems where it provides leveling, de-aeration, and mar resistance. Good re-coatability and heat stability.	36

PRODUCT	DESCRIPTION	SOLID %	SOLVENT	VISCOSITY 25°C, CST	DILUENTS	SYSTEM S/W/UV	FDA COMPLIANCE	Dosage %	Slip	Foam Control	Mar Resistance	Leveling, Wetting Flow	Gloss	COMMENTS	Shelf Life months from date of manufacture
Siltech C-101	Silicone polyether copolymer	100	None	200-500	Water, polar solvents, aromatic solvents	S/W	No	0.10-1.50	0		Θ	OO	0	Reduces surface tension and improves flow-out, leveling, wetting and gloss.	36
Siltech C-400	Silicone polyether copolymer	100	None	80-120	Water, polar solvents, butyl glycol, butyl acetate	S/W	175.105 176.170 177.1520	0.05-1.00				$\Theta\Theta$		Used in solvent-borne, water-based and solventless coatings and inks. Provides good substrate wetting, flow and leveling.	36
Siltech C-259	Silicone polyether copolymer	100	None	700-1,100	Water, polar solvents, xylene	S/W		0.10-1.50	Θ		Θ	OO	Θ	Designed to reduce surface tension, improve wetting and compatibility in water and solvent-borne systems.	36
Siltech C-4100	Silicone antifoam compound	100	None	8,000-12,000	Water, isopropyl alcohol, non-polar solvents	S/W	175.105 176.170 176.180 176.210	0.05-0.50		OO				Excellent antifoaming and de-foaming in various coating systems.	24
Siltech C-4800 Siltech C-4830 Siltech C-4930	Emulsion of foam-destroying silicones and silica	65 40 40	Water	2,000-6,000 1,000-3,000 2,000-5,000	Water, polar solvents	S/W W W	No	0.10-1.00		O O				Defoamer for water-based systems.	36





Siltech C-4660	Universal defoamer, contains silica	60	Water	1,200	Water	W	No	0.1-0.50		00			Defoamer for water-based systems. Effective against micro-foam during mixing or let-down; compatible with most waterborne coating and paint systems.	12
Siltech C-4714	Universal deformer to control foam without defects in waterborne and solvent-borne coatings, contains silica	100	None	3,000	Water, polar solvents	W/S		0.1-0.5		00			Effective against micro-foam during mixing or let-down; compatible with most waterborne and solvent-borne coating and paint systems	24
Siltech C-4726	Universal defoamer, contains silica	100	None	1,000	IPA Glycol ether EB	W/S	No	0.1-0.50		00			Defoamer for water-based systems. Effective against micro-foam during mixing or let-down; compatible with most solvent-borne and waterborne coating and paint systems.	12
Siltech C-4760	Universal deformer to control foam without defects in waterborne coatings, contains silica	60	Water	2,000	Water	W		0.1-0.5		00			Effective against micro-foam during mixing or let-down; compatible with most waterborne coating and paint systems.	12
Siltech C-22	Silicone polyether copolymer	100	None	300-600	Polar solvents, aromatic solvents, methylene chloride	S/W	No	0.05-1.00	Θ	00	Θ		Used in solvent-borne, water-based and energy-cured coatings and ink formulations to improve anti-blocking and mar resistance. It also acts as a defoamer in water-based systems.	36
Fluorosil TFP 1000	Fluorosilicone fluid	100	None	1,000	Acetone, ketones	S	No	0.05-0.50		00			Effective foam control agent in many organic systems. It also provides lubricity and reduced coefficient of friction.	36