

Polyurethane SILICONE SURFACTANT Product Guide

Elé Corporation is an ISO 9001:2008 Certified global manufacturer of specialty and intermediate chemicals used in a wide range of industrial applications and consumer products. During the 1950's we pioneered the benefits of urethane chemistry producing novel silicone surfactants, catalysts, and polyols. Backed by our highly experienced R&D team we continue to innovate in the polyurethane market, offering a comprehensive line of silicone surfactants.

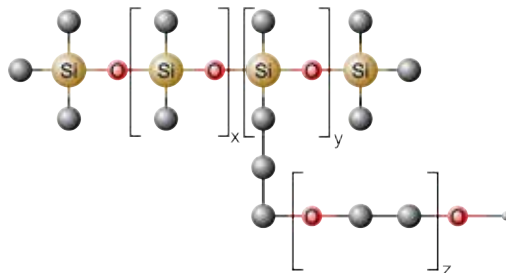
Elé is responsive and flexible in formulating and manufacturing to satisfy customers' unique needs. Our extensive network of reactors allows us to support our customers from project inception, to scale-up, through commercial success. We embrace customized requirements.

Surfactants are necessary to emulsify blowing agents and fire retardants, improve mixing and flow, control cell size and uniformity, and enable formation of stable chars under fire conditions. Elé's unique line of PEL-SIL Silicone Surfactants is designed to optimize processing, installation, and fire resistance properties of polyurethane foams.

Product Name	Rigid Foams				Typical Properties				Product Description/Benefits
	Bunstock	PIR	Pour-in-place	Spray	Viscosity, (cps) at 25° C	Density (g/cm ³) @25C	Flashpoint (C)	Calculated Hydroxyl No., w/o Water	
PEL-SIL 1314		x			2000	1.05	>94	160	Excellent flowability and emulsification, strong stabilizer, optimized for pentane isomers. Plant operations are more reliable following shutdown/re-start when polyol side does not phase separate
PEL-SIL 1315		x			935	1.07	>94	300	Excellent flowability and emulsification, moderate stabilizer, optimized for pentane isomers. Plant operations are more reliable following shutdown/re-start when polyol side does not phase separate.
PEL-SIL 1316		x			2000	1.05	>94	31	Excellent flowability and emulsification, moderate stabilizer, optimized for pentane isomers. Plant operations are more reliable following shutdown/re-start when polyol side does not phase separate. Lower hydroxyl number requires less isocyanate to maintain selected index.
PEL-SIL 1317		x			950	1.06	>94	288	Excellent flowability and emulsification, optimized for pentane isomers. Plant operations are more reliable following shutdown/re-start when polyol side does not phase separate.
PEL-SIL 9235				x	300	1.07	>94	0	Provides excellent emulsification and improved mixing in spray foam applications. More regular cell structure and consistent curing deliver a uniform product during installation.
PEL-SIL 9315	x	x	x	x	250	1.07	>100	79	Balanced surfactant that works in all rigid foam applications; excellent polyol compatibility improves polyol side stability. Blowing agent utilization is improved resulting in lower foam densities, better insulation performance and lower system cost.



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PEL-SIL 9346		x	x		300	1.04	>94	60	Good flowability and fine cell structure improve corner fill and k-factor, providing lower repair rates and consistent compliance with energy standards.
PEL-SIL 9382	x	x		x	1900	1.04	>63	0	Capped surfactant compatible with the isocyanate, strong stabilizer for rigid systems allowing more latitude for polyol side formulation focusing on emulsification and fine cell structure.
PEL-SIL 9416		x		x	205	1.06	>94	92	Balanced surfactant for medium to low water level formulations; good flowability and good polyol compatibility. Improves flowability resulting in lower rework and scrap rates.
PEL-SIL 9450	x	x			1800	1.04	>94	0	Capped surfactant compatible with the isocyanate, strong stabilizer for rigid systems allowing more latitude for polyol side formulation focusing on emulsification and fine cell structure.
PEL-SIL 9712	x	x		x	150	0.985	>94	77	Balanced surfactant for low water formulations utilizing more hydrophobic polyols. Improves flowability resulting in lower rework and scrap rates.
PEL-SIL 9738	x	x	x	x	250	1.08	>94	0	Efficient hydrophilic emulsifier, promotes fine cell structure, isocyanate compatible for additional formulating latitude. Good polyol compatibility improves polyol side stability. Blowing agent utilization is improved resulting in lower foam densities, better insulation performance and lower system cost.
PEL-SIL 9868		x			800	1.07	>94	62	Balanced strongly stabilizing surfactant, enhances foam stability in medium to high water level formulations with lower functionality polyols. Can be used to improve flow, resulting in lower repair and scrap rates.