

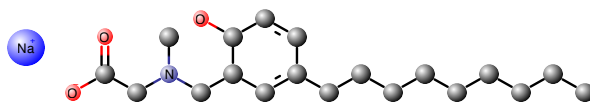
Elé Corporation is an ISO 9001:2008 Certified global manufacturer of specialty and intermediate chemicals used in a wide range of industrial applications and consumer products. During the 1950's we pioneered the benefits of urethane chemistry producing novel silicone surfactants, catalysts, and polyols. 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.

Optimizing the reaction profile is necessary to minimize rework and scrap, and achieve ideal attributes such as desired processing time, insulation value, flame retardancy, compressive strength, and facer adhesion. Elé's extensive line of PEL-CAT Catalysts helps achieve the optimal reaction profile by varying front end delay, flow, blow/gel balance and extent/timing of trimerization.

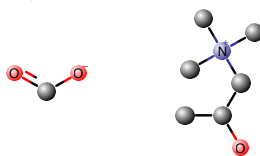
AMINO ACID

Product Name	Type	Rigid Foams				Typical Properties			Product Description/Benefits
		Bunstock	PIR	Pour-in-place	Spray	Viscosity, (cps) at 25° C	Water, %	Calculated Hydroxyl No., w/o Water	
PEL-CAT 9858-A	amino-acid		x			15500	1.0	501	Co-catalyst to improve back end curing of PIR foams; moderate rate of trimer formation and excellent compatibility with low water and hydrophobic systems; may also improve surface cure.



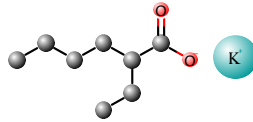
QUATERNARY AMINE SALTS

Product Name	Type	Rigid Foams				Typical Properties			Product Description/Benefits
		Bunstock	PIR	Pour-in-place	Spray	Viscosity, (cps) at 25° C	Water, %	Calculated Hydroxyl No., w/o Water	
PEL-CAT 9807	quat	x	x			350	0.3	463	Uniform and controlled rise profile for PIR foams; moderately high trimer formation rate minimizes knit lines and improves foam strength and uniformity without sacrificing processing time.
PEL-CAT 9715	quat	x	x			130	2.0	463	Slightly delayed action catalyst for better flowability in rigid foam applications; moderately high trimer formation rate minimizes knit lines and improves foam strength and uniformity without sacrificing processing time.
PEL-CAT 9669	quat	x	x		x	50	4.0	640	Moderately delayed action catalyst for better flowability in rigid foam applications; moderately high trimer formation rate minimizes knit lines and improves foam strength and uniformity without sacrificing processing time.
PEL-CAT 9821	quat		x	x		34	2.2	687	Excellent trimerization catalyst for pour in place applications - longer delay maximizes wet out and flow.
PEL-CAT 9716	quat	x	x		x	175	2.0	560	Significantly delayed action catalyst for better flowability in rigid foam applications - longer delay maximizes wet out and flow; lower odor than 9669 or 9821.



POTASSIUM CATALYSTS

Product Name	Type	Rigid Foams				Typical Properties				Product Description/Benefits
		Bunstock	PIR	Pour-in-place	Spray	Viscosity, (cps) at 25° C	Water, %	Calculated Hydroxyl No., w/o Water	K, %	
PEL-CAT 9648	acetate	x	x			200	1.0	1115	15.3	Effective trimerization catalysts for rigid and semi-flex foams; high rate of trimer formation improves flammability properties and compressive strength. PEL-CAT 9648 has a high level of potassium in ethylene glycol solvent and is the most water compatible. PEL-CAT 9650 & 9650-A are in diethylene glycol solvent with lower potassium levels. Primary trimerization catalysts for wide range of rigid foams; high rate of trimer formation improves flammability properties and compressive strength. PEL-CAT 9540 & 9540-A are standard 15% K Octoate in diethyleneglycol (DEG), they differ slightly in water content. PEL-CAT 9659 contains 7% unneutralized 2-ethylhexanoic acid to provide front end delay, and PEL-CAT 9865 is a lower viscosity version prepared in ethylene glycol (EG).
PEL-CAT 9650	acetate	x	x			165	3.3	740	10	
PEL-CAT 9650-A	acetate	x	x			260	1.0	740	10.7	
PEL-CAT 9540	octoate	x	x			7400	2.8	271	15.3	
PEL-CAT 9540-A	octoate	x	x			7400	3.3	271	15.3	
PEL-CAT 9659	octoate	x	x			1100	2.0	452	10.3	
PEL-CAT 9865	octoate	x	x			2200	3.3	460	15.3	



TERTIARY AMINES

Product Name	Type	Rigid Foams				Typical Properties				Product Description/Benefits
		Bunstock	PIR	Pour-in-place	Spray	Viscosity, (cps) at 25° C	Water, %	Calculated Hydroxyl No., w/o Water	Amine Value	
PEL-CAT 728	amine		x	x	x	125	0.5	560	333	Strong urethane gel catalyst, most effective with high ethylene oxide (EO) content polyether polyols and EG/DEG polyester polyols. Promotes urethane formation early in the foaming process, shortens time to trimerization onset in low to moderate water level formulations.
PEL-CAT 9749-A	amine	x	x	x	x	10	0.4	0	660	Stongly promotes the blowing (urea) reaction early in the foaming process. Provides early foam flow to improve fill prior to significant viscosity build, shortens time to trimerization onset in high water formulations.
PEL-CAT 9640	amine		x	x	x	31	0.4	0	488	Moderate activity, smoother reaction profile due to early blow and gel activity followed by more gradual onset of trimerization, improves dimensional stability and minimizes knit lines.
PEL-CAT 9640-A	amine		x	x	x	30	0.4	0	488	Moderate activity, smoother reaction profile due to early blow and gel activity followed by more gradual onset of trimerization, improves dimensional stability and minimizes knit lines.
PEL-CAT 9666	amine	x	x	x		45	0.1	0	380	Most delayed action trimerization catalyst, suitable for CASE Applications. When used as a co-catalyst, improves wet out and flow without significantly extending overall cure time.
PEL-CAT 9667	amine	x	x	x		280	0.1	0	618	Delayed action trimerization catalyst, suitable for CASE Applications. When used as a co-catalyst, improves wet out and flow without significantly extending overall cure time.

