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Urethane Additives Guide

Europe, Middle East, Africa and India

Flexible Slabstock Foam

	Niax* Silicone																
	Conventional Foam						High Resilience Foam				Polyester Foam					VE	
Niax Silicone	Wide Processing	Efficiency	Hydrolytic Stability	CO_2 Blown Foam	FR Property	Low Emission for general use	General Purpose	Combustion Modified	High Density	MDI Foam	General Purpose	Low VOC / Low Fogging	FR Property	Nonylphenolethoxylate Free	Cell Structure	Cell opening	Product Description
L-565		M	●	●													Recommended for low density formulations. Improved tear properties
L-580		M	●	●													Recommended for low density formulations
L-590	●	M	●	●													Wide processing latitude for all conventional foams
L-595		M		●													High efficiency silicone for improved foam yield
L-620	●	H			●												Very high efficiency with wide latitude for conventional and FR
L-650	●	M		●	●												Recommended for liquid CO_2 FR formulations, separate metering
L-618	●	M			●												Wide processing FR silicone with medium efficiency
L-680		M	●		●												FR silicone, can be used in activators
L-670	●	M															Silicone for natural based polyol foams
L-690		H	●		●												FR silicone, can be used in activators
SC-240		M	●	●													Standard silicone for continuous and discontinuous slabstock productions
L-598	●	L	●														Wide processing latitude, moderate efficiency for medium to high density conventional foam
L-818	●	M			●	●											Low emission. Wide processing FR silicone with medium efficiency
L-820	●	H			●	●											Low emission. Wide processing FR silicone with medium efficiency
L-895		H		●		●											Low emission. High efficiency silicone for improved foam yield
L-2108						●	●	●	●	●							Low emission. Universal HR silicone
L-2100							●	●	●	●							Universal HR silicone, gives easy-to-crush foam
L-2171							●	●									HR Silicone for PHD and SAN systems
L-530											●			●	R		Universal ester silicone
L-534												●			C		Low fogging and broad range
L-539												●		●	F		Textile grades
M-6682E												●	●	●	R		Organic surfactant. Recommended for die-cuttable and FR ester foams of medium-to-high density
L-626																●	Specialty silicone for visco-elastic foams
L-627																●	Low viscosity specialty silicone for visco-elastic foams
L-629						●										●	Lower emission specialty silicone for visco-elastic foams

Flexible Slabstock Foam

Niax Catalyst	Niax* Catalyst: Conventional Foam: Blow	Conventional Foam: Balanced	Conventional Foam: Gel	Conventional Foam: Low emission	Conventional Foam: Stabilising	High Resilience Foam: Blow	High Resilience Foam: Balanced	High Resilience Foam: Gel	High Resilience Foam: Low emission	Polyester Foam: Blow	Polyester Foam: Balanced	Polyester Foam: Gel	Polyester Foam: Low emission	Polyester Foam: Nonyl Phenol Ethoxylate Free	Product Description
A-1	●					●									High efficiency blowing catalyst
A-133	●					●									Dilution of E-A-1 for easy metering
B-4		●													Balanced catalyst, optimum for square blocks, Flat top or Maxfoam system
B-18		●					●								Balanced catalyst, with longer cream time for Maxfoam process
A-33			●					●							Gel catalyst
SA-200					●										Stabilising amine for low density foams
EF-867		●		●			●		●						Emission free balanced catalyst for automotive applications, can reduce foam smell
EF-600		●	●				●	●							Emission free gel catalyst, can reduce foam smell
EF-700	●	●				●	●								Emission free blow catalyst, can reduce foam smell
C-131NPF										●				●	Blowing catalsyt for low fogging polyester foam
KST-100NPF											●			●	Balanced catalyst for low fogging polyester foam
DMP												●		●	Gel co-catalyst for polyester foam
Sn Octoate			●					●							Stannous Octoate
DBTDL								●							Dibutyltindilaurate
D-50	●			●											Blowing catalyst with low DMF content

LEGEND - page 1

M = Medium
m = moderate
H = High

R = Regular
F = Fine
C = Coarse

FR = Flame retardant
HR = High resilience
PHD = Bayer system

SAN = Styrene - acrylonitrile system
MDI = Methylene diisocyanate
VE = Visco-elastic

Processing Additives
Flexible Slabstock Foam

Geolite* Modifier	Features
GM-206	Additive for soft foam grades at 90-100 TDI index with safe processing
GM-91	Processing aid additive, it allows the production of quality foam with critical formulations, reduces properties gradients
GM-HR	Stabilising additive to obtain rectangular block shape in high resilience foams when SO replaces DBTDL
Niax* Processing Additive	**Features**
DP-1022	Processing aid additive, it improves mechanical properties in filled foams and high resilience foams
Niax other additives	**Applications**
Antistatic AT-66	Antistatic additive for use in polyether and polyester foam
Color Stabilizer CS-15	Antioxidant for low density polyether foam
Color Stabilizer CS-22 LF	Antioxidant improving light stability and enhancing flame lamination properties
Flame Lamination FLE-200 LF	Latest generation additive for flame laminable foam
Foam Hardener FH-300	Additive to enhance foam hardness - It increases tensile, elongation and tear strength
Foam Hardener FH-400	Additive to enhance foam hardness - Can be blended into polyether polyol
Niax additive A-382	Improves hydrophilicity of polyester foam
DCF	Additive to improve clickability and foam recovery after compression
L-853	Additive for polyether sea sponge foam
Niax Color Paste	**Applications**
Yellow 223	Low viscosity color for polyurethane slabstock foam
Red 408	Low viscosity color for polyurethane slabstock foam
Green 701	Low viscosity color for polyurethane slabstock foam
Blue 614	Low viscosity color for polyurethane slabstock foam
Black 028	Low viscosity color for polyurethane slabstock foam

Molded Foam

Niax Silicone	Niax* Silicone HR TDI	Niax* Silicone TDI/MDI	Niax* Silicone HR MDI	Product Description
L-3001		●	●	High cell opening silicone
L-3111		●	●	High cell opening silicone
L-3415			●	Low fogging silicone with high cell opening
L-3418			●	Low fogging silicone with superior cell opening
L-3002		●	●	Medium cell opening silicone
L-3010		●	●	Improved emulsification and high cell opening silicone
L-3222		●	●	Medium cell opening silicone
L-3416		●	●	Low fogging silicone with medium cell opening
L-3003		●	●	Stabilizing silicone
L-3333		●	●	Stabilizing silicone
L-3417		●	●	Low fogging; stabilizing silicone
L-2171 (Y-10366)	●	●	●	High efficiency; balanced silicone
L-3620		●		Low potency, low fogging silicone for TDI/MDI technology
L-3630		●		Medium efficiency, low fogging silicone for TDI/MDI technology
L-3640	●	●		High efficiency, low fogging silicone for TDI/MDI technology
L-3170	●			High efficiency balanced silicone
L-3360	●			High efficiency balanced silicone
L-3350	●			High stability silicone
L-3555	●			High stability, low fogging silicone
L-3150/L-3151	●	●		High efficiency; balanced silicone may be particularly suitable for TDI/MDI blends
L-3167	●	●		Cell regulator; co-silicone for TDI
L-5309/SH-209	●			High efficiency balanced silicone
L-3184	●			High efficiency balanced silicone

TDI/MDI = typically 80/20 blend / TDI = Toluene diisocyanate / MDI = Methylene diisocyanate

Molded Foam

Niax* Catalyst				
Niax Catalyst	Blow Amine Catalyst	Balanced Amine Catalysts	Gel Amine Catalyst	Product Description
A-1	●			Key blow catalyst
A-107	●			Key delayed action blow catalyst
A-400	●			Delayed action load building (TDI); cell opening blow catalyst; improved flowability (MDI) (low corrosion)
A-440	●			Delayed action load building (TDI); cell opening blow catalyst; improved flowability (MDI) (low corrosion)
A-4	●			Low staining catalyst for improved surface cure
C-174	●			HR MDI blow catalyst
B-26	●			HR MDI delayed action blow catalyst
A-355		●		Delayed action catalyst; predominantly blow; cell opening and enhanced curing
A-375		●		Delayed start of reaction; may improve foam flow; may enhance foam curing in HR MDI
C-225		●		Delayed action catalyst; enhanced curing
A-310		●		Balanced cost-effective catalyst; may enhance skin cure (MDI & MDI/TDI)
A-337			●	Surface curing catalyst; low mold temperature (MDI & MDI/TDI)
A-300			●	Delayed action load building; cell opening gel catalyst (low corrosion)
A-33			●	Key gel catalyst
Emission Free Catalyst				**Product Description**
EF-600		●	●	Balanced catalyst; predominantly gel
EF-602		●	●	Balanced delayed catalyst; predominantly gel
EF-700	●	●		Balanced catalyst; predominantly blow
EF-705	●	●		Balanced cell opening delayed catalyst; predominantly blow
EF-708	●	●		Balanced catalyst; predominantly blow
EF-712		●	●	Balanced catalyst with fast end cure

HR = High resilience

Rigid Foam

Niax Silicone	Niax* Silicone: Fine cells	Pentane solubility in Polyols	Blowing agents emulsification	Foam Dimensional Stability	Foam Flow / Density Distribution	FR Properties (DIN 4102)	Void Reduction	Product Description
L-6884	●●●●	●●●	●●	●●	●●●	●●	●●●	Can improve polyol/pentane or HFC's compatibility - can provide very fine cells and good flow, for refrigerators and all discontinuous applications
L-6887E	●●●●	●●●●	●●	●●	●●●	●●	●●●	Best polyol/pentane solubility - can provide very fine cells, for discontinuous applications especially refrigerators
L-6888	●●●	●●●●	●●	●●	●●●	●●●	●●	Can improve polyol/pentane compatibility - moderate FR properties mainly for discontinuous panels
L-6889	●●●	●●●●	●●●●	●●	●●●	●●	●●●	Can improve polyol/pentane compatibility, reduce surface voids, fine cells, mainly for discontinuous applications
L-6988	●●●●	●●	●●●	●●	●●●	●●	●●●	Very fine cells with pentane and HFC's/HCFC, increase froth shear stability thus reducing voids formation
L-6965	●●	●●●	●●	●●●	●●●	●●●●	●●	Good combination of FR properties and strong stabilization, can improve foam structure also in critical formulations
L-6900	●●●	●●	●●●	●●	●●●	●●	●●●	Strong emulsifier, fine cells with all blowing agents - continuous and discontinuous applications
L-5111	●●●●	●●	●●●●	●●●	●●●	●●	●●●	Fine cells with pentane blowing agents - for PIR/PUR boardstock lamination
L-6915LV	●●	●●●	●●●●	●●●	●	●●	●●	Excellent in solubility/emulsification for Pentane and HFC's blown formulations also with APP polyol
L-5107LF	●	●●	●●●	●●●●	●●●	●●●	●●	Pentane, HFC's or water blown foam, can improve dimensional stability for PIR/PUR in lamination and spray
SR-321	●●	●●●	●●	●●●	●●●	●●●	●	For HCFC but also HFC's and pentane co-blown with water, for all applications, good flow and dimensional stability
L-6980	●●	●●	●●	●●●	●●	●●●●	●●	good FR properties - lamination, block and spray

HFC = Hydro Fluoro Carbon / HCFC = Hydro Chloro Fluoro Carbon / PIR = Polyisocyanurate / PUR = Polyurethane / Features : Strong = ●●●●● Moderate = ●

Rigid Foam

Niax Silicone	Niax* Silicone: Fine cells	Pentane solubility in Polyols	Blowing agents emulsification	Foam Dimensional Stability	Foam Flow / Density Distribution	FR Properties (DIN 4102)	Void Reduction	Product Description
L-5348	●●	●	●●●	●●●	●●●	●		1K/OCF foam, also HFC free, high froth volume, good compatibilization, excellent storage stability
L-5388	●●	●	●●●	●●●	●●●	●		1K/OCF foam, also HFC free - high low polar fillers loading
SR-234	●●	●●	●●●●	●●●	●●●	●●	●●	1K/OCF foam, good emulsification also for structural foam, blocks and phenolic foams
L-5351	●●●	●●●●	●●●●	●●●	●●●	●●	●●	1K/OCF foam - can improve foaming at low temperature and without HFC's
L-5352	●●●	●●●●	●●●●	●●●	●●●	●●	●●	1K/OCF foam - can improve foaming at low temperature and without HFC's
L-6164	●●		●●	●●●●	●●	●●●		Cell-opener, cell-regulator - very efficient cell opener, OCF/1K and systems, dimensional stability and FR
L-6186	●●●		●●	●●●●	●●	●●●		Open cells rigid foam - also efficient in overpacked conditions and high index - polyether and polyester based
L-6189	●●	●	●●●	●●●	●●	●	●●	Packaging foam & low density spray open cells - can improve storage stability
L-6190	●●●	●	●●●	●●●	●●	●	●●	Packaging foam & low density spray open cells - good balance froth stabilization and cell opening
L-6630	●●	●	●●	●●●	●●●●	●●	●●●	Reduce foam voids formation in continuous and discontinuous application - effect increase with higher usage level
L-6633	●●	●●●	●●●	●●●	●●●●	●●	●●●	Can reduce voids formation and excellent polyol compatibility - efficiency can increase with usage level
L-6635	●●	●●	●●	●●●	●●●	●●	●●●●	Premium grade silicone to reduce foam voids and achieve best surface quality in metal faced panels PUR and PIR

NCO = Isocyanate / PU = Polyurethane / 1K/OCF = 1 Component foam / HFC = Hydro Fluoro Carbon / Features : Strong = ●●●●● Moderate = ●

Rigid Foam

Niax Catalyst	PUR discontinuous	PIR discontinuous panels	PUR continuous lamination and block	PIR continuous lamination and block	PUR/PIR discontinuous block	Spray	Water blown PUR and PIR foam	Packaging, open cells foam	Product Description
A-1	●	●	●	●	●	●	●	●	Very effective blowing catalyst, promote selectively water-NCO reactions, can improve foam flow and rate of expansion
C-5	●		●	●		●			PMDETA general purpose blowing catalyst
C-8	●	●	●		●	●	●	●	DMCHA general purpose PUR catalyst
PM-40			●	●	●				Blowing catalyst based on A-1, moderate odor and viscosity and suitable for direct metering, danger symbol Xi rather than T
BDMA	●	●	●		●	●	●	●	Dimethylbenzylamine, weak gel catalyst, can reduce surface friability and can improve foam adhesion in particular with mainly water-blown foams
DMEA	●		●		●	●			Moderate odour, cost-effective, reactive catalyst
DMEE	●	●					●	●	Moderate odour, cost-effective, reactive catalyst, more blowing efficiency compared to DMEA
DMDEE	●	●			●			●	Moderate activity blow catalyst, excellent storage stability also in isocyanate and prepolymers, 1K/OCF foams
PM20 plus			●	●			●	●	Blow-gel catalyst suitable for direct in line metering in the continuous lamination of PUR or for PIR in combination with a potassium catalyst
C-41	●	●	●	●		●			Strong gel catalyst promoting both PUR and PIR reaction, promote fast crosslinking, can reduce demould time and improve foam adhesion
Potassium Octoate LV			●	●	●				15% K containing PIR catalyst suitable for direct metering (2500 cPs), also good as general purpose curing catalyst in PUR
Potassium Octoate	●			●					15% K containing PIR catalyst, also good as general purpose curing catalyst in PUR
K-ZERO 3000	●	●	●	●	●	●	●		Glycol free Potassium Octoate, 15% Potassium, 3000 cPs viscosity, PIR catalyst
Potassium Acetate	●			●	●	●			15% K containing PIR catalys, also good as general purpose curing catalyst in PUR
Fomrez[1] Tin Catalyst	●					●		●	Alternatives to DBTDL, higher hydrolytic stability, activity or delayed effect
Niax Processing Addtives									**Product Description**
RA-1		●		●	●		●	●	Can speed up foam hardening and adhesion without influencing gel time, in particular for PIR foam made with aromatic polyester polyols
CS-15		●		●	●		●	●	General purpose antiscorching / antioxidant
AP-01/AP-02	●	●	●	●		●	●		Adhesion promoter additives

PUR = Polyurethane / PIR = Polyisocyanurate / NCO = Isocyanate

Microcellular Foam

	Niax* Product											
	Mechanical froth	Microcellular (Polyether)	Microcellular (Polyester)	LD SRIM	HD SRIM	One-shot elastomer	Cast elastomer	Spray elastomer	Spray foam	Molded foam	Coatings	PU leather
Niax Silicone												**Product Description**
L-1000				●	●	●						Resin-Side nucleation surfactant for one-shot elastomer systems
L-1500			●									Industry-standard surfactant for microcellular systems
L-1501		●	●									Wide-processing latitude microcellular surfactant for low-medium density systems
L-1505		●	●									High-performance microcellular surfactant for low-medium density systems
L-1540			●	●	●				●			High-performance microcellular surfactant for high density systems
L-1580			●				●					Isocyanate-side surfactant for polyester-based microcellular and cast elastomer systems
L-1602		●										High-performance microcellular surfactant for high density systems
L-1609		●										High-performance microcellular surfactant for low-medium density systems
L-1800				●	●	●	●		●		●	Iso-side nucleation surfactant for one-shot elastomer systems. Compatibilizer for cast elastomers
L-5614	●											Industry-standard surfactant for the mechanically frothed foam process
L-5617	●											Zero VOC surfactant analog of L-5614 used in the mechanically frothed foam processes
L-1150											●	Cell regulating surfactant. Improves water/DMF exchange
L-1168												● Silicone Modifier. Improves anti-sticking, surface-leveling, hydrophobicity and flexibility
L-1010		●										Surfactant for automotive applications such as steering wheels
Niax Amine Catalyst												**Product Description**
A-501		●	●	●								Industry-standard blowing selective catalyst
A-507		●	●	●								Delayed-action, blowing-selective catalyst for open-mold pouring applications
A-510	●	●	●									Delayed-action, blowing-selective catalyst with cell-opening properties
A-530	●	●	●		●	●						Delayed-action TEDA-based catalyst with cell-opening properties
A-533		●	●		●	●	●					Industry-standard TEDA catalyst in (mono)ethylene glycol
A-537		●	●	●								Delayed-action TEDA-based catalyst for open-mold pouring applications
A-575					●	●	●					Temperature-activated, delayed-action, powerful, gelling-selective catalyst
A-577		●		●		●	●					Delayed-action, powerful, gelling-selective catalyst
Fomrez[1] Tin Catalyst												**Product Description**
UL-28						●		●			●	Elastomer (including spray) systems
UL-50						●		●			●	Elastomer (including spray) systems
SUL-4						●		●			●	Key catalyst for elastomers and foams
UL-38		●	●		●	●		●			●	Elastomer and microcellular systems
UL-22									●			PU foam systems, including spray
UL-32		●	●		●				●	●	●	PU foam (especially microcellular) systems
UL-29	●	●	●	●	●	●	●	●	●	●	●	Microcellular and mechanically frothed foam, elastomer, and spray (long pot-life) systems
SUL-11b						●					●	Elastomer

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