



ALWAYS ONE
STEP AHEAD

POLYURETHANE ADDITIVES GUIDE

FLEXIBLE SLABSTOCK FOAM



CONTENTS

Polyurethane Additives for Flexible Slabstock Foam	3	Niax Silicones for High Resilience Foam	7
Niax™ Polyurethane Additive Guide	4	Niax Surfactants for Polyester Foam	8
Niax Conventional Silicones	5	Niax Silicones for Specialty Application	9
Niax Flame Retardant Silicones	6	Geolite™ Modifiers	9
Niax Silicones for Viscoelastic Foam	7	Niax Process Modifiers	10
		Niax Catalysts	11

A LEADER IN POLYURETHANE ADDITIVES

Momentive Performance Materials offers one of the most trusted and diverse polyurethane additive product lines in the industry, ranging from a broad array of silicone stabilizers and a full portfolio of amine and metal-based catalysts to a selection of organic-based property modifiers.

Developed in 1962, Niax brand additives have long been essential ingredients in polyurethane formulations used to meet the specialized processing and performance needs of customers across the globe. Niax grades include a comprehensive line of silicones, catalysts, and process modifiers for polyurethane foam production. Momentive also offers Geolite™ modifiers to help flexible slabstock foam producers broaden their offering of foam grades.

Momentive is a pioneer in the polyurethanes additives industry, and continues to serve customers with leading innovations, creative solutions, and excellent application expertise.



**MOMENTIVE
POLYURETHANE
ADDITIVES
GLOBAL SITES**

POLYURETHANE ADDITIVES FOR FLEXIBLE SLABSTOCK FOAM

Niax Silicones

Furniture
Bedding
Technical foams
Laminated foams

Niax Catalysts

General amine catalysts
Metal catalysts
Low emission catalysts

Niax & Geolite Modifiers

Antioxidant	Flame lamination
Antistatic	Foam hardeners
Color pastes	Process modifiers

NIAX

POLYURETHANE ADDITIVES GUIDE

THE ROLE OF SILICONE SURFACTANTS IN POLYURETHANE FOAM:

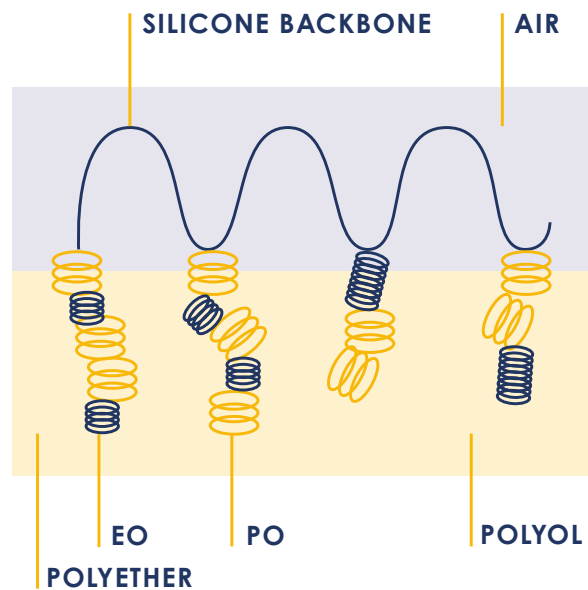
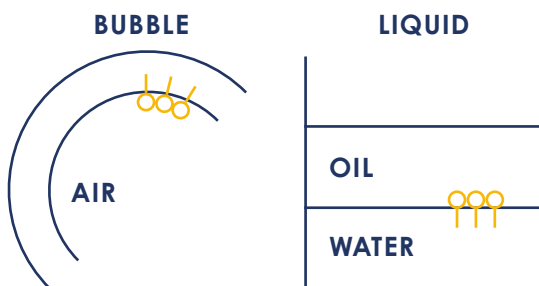
- ✓ Improve reaction mix compatibility, widen formulation selection and process latitude
- ✓ Provide bulk foam stabilization to prevent phase separation and collapse
- ✓ Regulate cell size and cell opening affecting, dimensional stability, comfort, elasticity, viscoelastic behavior
- ✓ Enhance physical properties and fire behavior

The surfactant acts at the interface of poorly compatible formulation components:

- The silicone backbone has an affinity for hydrophobic/ non-polar materials
- The polyether pendants are drawn towards more hydrophilic/ polar materials



Momentive has designed a full range of high performing standard, universal, and specialty silicones for the production of flexible polyurethane slabstock foam, that allows foam producers to tailor solutions to customers, and to offer a broad variety of foam grades.



NIAX

CONVENTIONAL SILICONES

Niax	Low Emission	Efficiency	Liquid CO2	Hydrolytic stability	Regional Availability	Typical Benefits
L-895	●	High	•		●	Higher foam block and improved foam yield
L-894	●	Medium	•		●	Improved side and top skin, very good foam physical property distribution
L-552	●	Medium	•	•	●	Wide processing latitude, general purpose use
L-854	●	Low-Medium	•		●	Wide processing, yielding fine and regular cells with improved foam porosity
L-633		Very High			●	Effective performance in ultra-low density foam formulations
L-570		High	•		●	Effective performance with low density foams that use inorganic filler and/or auxiliary blowing agents
L-595		High	•		●	Higher foam block and improved foam yield
L-580		Medium-High	•	•	●	Effective performance in low density formulations, water premix stability
L-594 Plus		Medium	•		●	Improved side and top skin, very good foam physical property distribution
L-540		Medium	•		●●	General purpose; effective performance in low to medium density formulations
SC-240		Medium	•	•	●	Wide processing latitude, general purpose, premix stable
L-590		Medium	•	•	●	Wide processing latitude for all conventional foams or MDI-based viscoelastic foam
L-598		Low	•	•	●	Very wide processing latitude for all conventional foams or MDI-based viscoelastic foam

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NIAX

FLAME RETARDANT SILICONES



Niax	Low Emission	Efficiency	CO2 Blown Foams	Hydrolytic stability	Regional Availability	Typical Benefits
L-820	●	Medium-High			●	Wide processing with medium FR performance
L-850	●	Medium	•		●	Outstanding FR performance in flame lamination and FR foam formulations
L-855	●	Medium			●	Exceptional FR property, fine cells with minimal required liquid flame retardant
L-835	●	Medium	•		●	Fine cells in liquid CO ₂
L-818	●	Medium			●	Wide processing with medium FR performance
L-620		Medium-High			●	Wide processing with medium FR performance
L-690		Medium-High		•	●	Medium FR performance silicone, broad effectiveness in activator blends
L-655		Medium	•		●	Medium FR property, fine cells with minimal required liquid flame retardant
L-618		Medium			●	Wide processing with medium FR performance
L-638		Medium	•		●	Wide processing in conventional and FR slabstock formulations
L-680		Low-Medium		•	●	Medium FR performance silicone, broad effectiveness with activator blends
L-668		Low-Medium			●	Wide processing in high density and visco-elastic formulations

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NIAX

SILICONES FOR VISCOELASTIC FOAM



Niax	Low Emission	Cell Opening	TDI	MDI	Pneumatic	Regional Availability	Typical Benefits
L-629LE	●	•	•	•		●	Low emission, low viscosity cell-opening with TDI viscoelastic foams
L-417	●			•	•	●	Low emission, fine cell structure and good mechanical properties with MDI based pneumatic visco foam
L-838	●		•	•		●	Low potency, optimum cell size and air flow control with both TDI and MDI based systems
L-626		•	•	•		●	Cell-opening with TDI viscoelastic foam
L-627			•	•		●	Low viscosity cell-opening silicone with TDI viscoelastic foam

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SILICONES FOR HIGH RESILIENCE FOAM



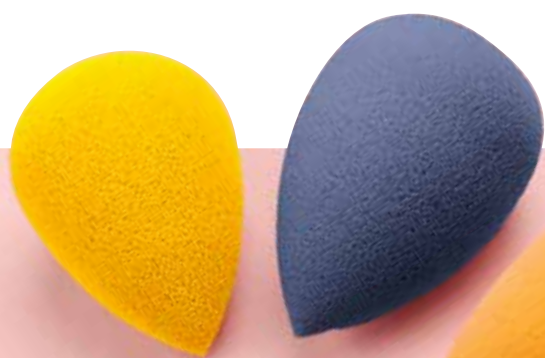
Niax	Low Emission	General Purpose	High Density	MDI	Regional Availability	Typical Benefits
L-2112	●	•	•	•	●	Universal silicone; wide processing and medium efficiency
L-2106	●	•		•	●	General purpose surfactant; low emission
L-3684	●	•		•	●	General purpose surfactant; low emission
L-3685	●	•	•	•	●	General purpose surfactant; improved processing latitude and low emission,
U-2000		•		•	●	General purpose surfactant; wide processing
L-2166		•		•	●	Effective performance with PHD and SAN systems
L-5333		•	•	•	●	Wide processing, enablement of easy-to-crush effect, and improved stability

NIAX

SURFACTANTS FOR POLYESTER FOAM



Niax	Low Emission	Efficiency	FR Property	Cell Structure	Regional Availability	Typical Benefits
SE-232	●	High		Regular	●	General purpose silicone surfactant
L-530	●	High-Medium		Regular	●	Low odor universal silicone surfactant
L-537XF	●	Medium		Fine	●	Universal silicone; promotion of fine and open cell structure
L-553NPF	●	Low		Fine	●	Silicone surfactant; promotion of fine cells
B-320NPF		High		Coarse	●	Silicone surfactant; promotion of fine and uniform cells over a wide density range; formulated without nonylphenol
B-325NPF		Low-Medium		Regular	●	Silicone surfactant; promotion of fine and uniform cells over a wide density range; formulated without nonylphenol
B-350NPF		Medium		Regular	●	Silicone surfactant; promotion of fine and uniform cells over a wide density range; formulated without nonylphenol
ES-1058		n.a.	•	Coarse	●	Organic surfactant; effective performance with medium to high density foam
A-2420		n.a.	•	Fine	●	Organic surfactant with emulsifying properties
M-6682NPF		n.a.	•	Fine	●	Organic surfactant; effective performance with die-cuttable and FR ester foams of medium-high density; formulated without nonylphenol



NIAX

SILICONES FOR SPECIALTY APPLICATION



Niax	Regional Availability	Typical Benefits
L-636LE	●	Low emission silicone; effective performance with gasketing and sealing applications
L-422	●	Low emission silicone; super-soft, open cell with MDI foam
L-450	●	Low emission cell-regulator to promote resiliency, air flow and to optimize compression set properties
L-500	●	Low emission additive; cell regulation with viscoelastic MDI foam. Improved dimensional stability of HR/CMHR foams

GEOLITE MODIFIERS

The Geolite modifiers product family comprises various processing aid additives that are typically used to eliminate or substantially reduce the use of auxiliary blowing agents. Furthermore, these modifiers can allow foam producers to improve on the foam quality and physical property distribution whenever special foaming conditions are applied.

GM	Regional Availability	Typical Benefits
91	●	Processing aid additive, improved foam quality and reduced risk of splits with critical formulations
206	●	Additive enabling safe processing with soft foam grades at 90-100 TDI index
210	●	Chemical stabilizer; enhanced softening with low index formulations
X-45	●	Cross-linker; efficient cross-linking and reduces foam discoloration in formulations containing halogenated flame retardants; broad compatibility with CME formulations

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NIAX PROCESS MODIFIERS

Our process and foam modifiers offer enhancement of existing material processes properties. From improved adhesion and reduced discoloration, to increased load-bearing and more, Momentive process and foam modifiers can be easily incorporated into current manufacturing processes.



Niax	Regional Availability	Typical Benefits
DP-1022	●	Processing aid additive, may improve mechanical properties in filled foams
FH-300	●	Foam hardener additive, improved tear, tensile and elongation properties
FH-400	●	Foam hardener additive, blendability with polyether polyol
Antistat AT-38	●	Antistatic additive; effective performance with conventional slabstock foam
CS-15	●*	Antioxidant; effective performance with low density polyether foam
CS-16	●	Antioxidant; improved anti-UV yellowing properties with polyether foam
CS-20LF	●	Additive for flame and heat lamination; enhanced adhesion properties, suitable for textile and automotive applications
CS-22LF	●	Additive for flame and heat lamination; improved indirect light stability with polyether and polyester foams
CS-25LF	●	Additive for flame and heat lamination with improved processing latitude and indirect light stability suitable for polyether and polyester foams
FLE-200LF	●	Flame lamination additive; improved bonding properties with flame lamination foam
FLE-500LF	●	Flame lamination additive; improved bonding properties with flame lamination foam
SC-300	●	Additive for polyether sea sponge foam
DCF	●	Improved clickability and foam recovery after compression in polyester foam

*All regions except Europe

NIAX CATALYSTS



Niax	Low Emission	Blow	Balanced	Gel	Polyester Foam	Regional Availability	Typical Benefits
EF-100S	●	•			•	●	Low viscosity, high efficiency reactive blow catalyst
EF-350	●	•	•			●	Low viscosity, high potency balanced catalyst
EF-600	●		•	•		●	Low emission gel catalyst, may reduce foam smell
EF-700	●	•	•			●	Low emission blow catalyst, may reduce foam smell
EF-867	●		•			●	Low emission balanced catalyst, may reduce foam smell
A-30NPF		•			•	●	High efficiency, low odor blow catalyst; nonylphenol-free formulation
B-9NPF			•		•	●	High efficiency, low odor balanced catalyst, nonylphenol-free formulation
C-131NPF		•			•	●	Blow catalyst for low fogging polyester foam; nonylphenol-free formulation
KST-100NPF			•		•	●	Balanced catalyst for low fogging polyester foam; nonyl-phenol-free formulation
A-1_S		•				●	High efficiency blow catalyst
A-133		•				●	Dilution of A-1 for easy metering
A-230			•			● ●	Balanced catalyst, optimum performance with square blocks, Flat top or Maxfoam system
A-33				•		●	Gel catalyst
B-18			•			●	Balanced catalyst; extended cream time for Maxfoam process
Sn Octoate				•		●	Stannous Octoate

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