

Niax* silicone L-620

Description

Niax silicone L-620 is a high-performance alkyl-pendant type organosilicone surfactant designed for use in conventional flexible slabstock foam. It offers superior performance in low-combustibility, all-water or methylene chloride blown filled and sponge foams. It gives maximum stability in formulations with reduced blowing agents using Geolite* modifiers. In all of these formulations, Niax silicone L-620 surfactant provides superior foam processability compared to any currently used surfactant.

Niax silicone L-620 is a high-efficiency surfactant that produces foam with minimum top collapse, high breathability, and a wide processing latitude. The use of Niax silicone L-620 surfactant results in minimized density and breathability gradients.

The superiority of Niax silicone L-620 has been demonstrated in both bench and full-scale machine trials for a wide range of flexible urethane slabstock formulations. Overall, Niax silicone L-620 is the superior product for the stabilization of conventional flexible slabstock foam.

Key Features and Benefits

- Provides superior processing for the full range of conventional, as well as low-combustibility, flexible slabstock polyether foams on all types of foam production equipment.
- Offers a wide breathability profile for all formulations over a wide range of silicone and tin catalyst levels
- Excellent stability
- Provides narrow density and IFD gradients
- Suitable for use in the full range of flexible polyether slabstock foams, including low-combustibility foams.

NUMERICAL FLAME SPREAD RATINGS ARE NOT INTENDED TO REFLECT HAZARDS PRESENTED BY THIS OR ANY OTHER MATERIAL UNDER ACTUAL FIRE CONDITIONS.

Typical Physical Properties

Physical Form	Liquid
Viscosity at 25°C, cSt	750
Color, GVS, (Gardner Varnish Standards)	>2
Specific Gravity at 20/20°C	1.04
Density at 25°C, lb/gal (kg/L)	8.64 (1.04)
Coefficient of Expansion, per °C	0.00077

Flash Point, Pensky-Martens Closed Cup ⁽¹⁾ , °F (°C)	212 (100)
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(1) ASTM D93

Processing Recommendations

Table 1: Screening Formulations for the Evaluation of Niax Silicone L-620

Component	Formulation, pphp				
	A	B	C	D	E
Polyol ⁽¹⁾	100.00	100.00	100.00	100.00	100.00
Water, Total	4.70	5.50	7.00	5.80	2.50
Niax Amine Catalyst ⁽²⁾	0.10	0.20	0.30	0.10	0.20
Stannous Octoate	0.25	0.23	0.27	0.25	0.18
TCFM-11	12.00	-	-	-	-
Methylene Chloride	—	10.00	9.00	2.00	4.50
Geolite* Modifier 91	-	—	1.10	-	-
DE-60F ⁽³⁾	-	-	-	14.00	-
TDI 80:20 (Index)	(110)	(112)	(100)	(111)	(110)
Silicone Surfactant	Varies	Varies	Varies	Varies	Varies

(1) Typical conventional slabstock polyols of OH-value between 42 and 58 mg KOH/g

(2) A = Niax catalyst A-1

B = Niax catalyst A-200

C = Niax catalyst A-220

D = Niax catalyst B-4 (available in Europe only)

E = Niax catalyst C-183

(3) Great Lakes Chemical

Patent Status

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