

## Niax\* catalyst A-230

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#### Description

Niax catalyst A-230 is a balanced gel blow catalyst for use with methylenechloride or other auxiliary blowing agents that tend to destabilize foam formulations. It can be used to produce both low and high-density foams. The superior blow characteristics of Niax catalyst A-230, compared to triethylenediamine (TEDA), allow the manufacture of foams possessing improved “hand” or feel. Moreover, this versatile catalyst performs equally well in formulations that do not use auxiliary blowing agents.

#### Key Features and Benefits

- Improved foam feel compared to foams made with TEDA catalyst
- Balanced blow-gel for best air flow control
- Permits widest tin latitude for best processing
- Gel rate is suitable for use with methylene chloride
- Provides equally good foam properties with both all-propylene oxide (PO) and ethylene oxide/propylene oxide (EO/PO) polyols

#### Typical Physical Properties

Physical Form	Liquid
Specific Gravity at 20/20°C (68/68°F)	0.955
Average Weight per Gallon at 20°C (68°F), kg (lb)	3.61 (7.94)
Alkalinity, meq KOH/g	6.6
Water, % by wt, max	0.05
Flash Point, Pensky-Martens Closed Cup <sup>(1)</sup> , °C (°F)	54 (130)

(1) ASTM D 93

#### Catalyst Evaluation

##### Low-Density Foams

The following two formulations were used to evaluate the performance of Niax catalyst A-230 in low-density

foams (10 and 12 kg/m<sup>3</sup>), using both an EO/PO polyol and an all-PO polyol.

Component	Concentration, Parts	
3000 MW EO/PO Polyol	100.00	-
3000 MW PO Polyol	-	100.00
Water	6.00	6.00
Niax Silicone L-580	1.50	2.25
Niax Catalyst A-230	0.25	0.30
Stannous Octoate, D-19	0.30	0.55
Methylene Chloride	15.00	25.00
TDI	78.90	78.90
TDI Index	115	115
<b>Foam Property</b>		
Density, kg/m <sup>3</sup>	12	10
IFD, N	110	60

### High-Density Foams

Excellent high-density foams can also be prepared using Niax catalyst A-230, as shown by the formulations below or 19 and 20 kg/m<sup>3</sup> foams. Note that these formulations also demonstrate that increasing the concentration of Niax catalyst A-230 results in higher breathability, which is why this amine catalyst offers such good processability.

Component	Concentration, Parts	
3000 MW EO/PO Polyol	100.00	100.00
Water	4.00	4.00
Niax Silicone L-688	1.00	1.00
Niax Catalyst A-230	0.10	0.20
Stannous Octoate, D-19	0.27	0.27
Methylene Chloride	5.00	5.00
TDI	52.00	52.00
TDI Index	110	110
<b>Foam Property</b>		
Density, kg/m <sup>3</sup>	20	19
Breathability, scfm	4.5	5.0
IFD, N	100	60

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