

# GEOLITE\* Modifier 206

URETHANE ADDITIVES - FLEXIBLE SLABSTOCK FOAM



Geolite Modifier 206 is a stabilizing additive that offers a technology that can eliminate or dramatically reduce the use of auxiliary blowing agents (ABA's) in many grades of conventional slabstock foam.

Like our earlier Geolite products, this technology is based on the principle of lowering the hardness of foam by reducing the isocyanate index, permitting the use of more water and less blowing agent to achieve desired foam hardness.

The use of Geolite Modifier 206 facilitates the production of many foam grades, at very low indices (about 85), while maintaining acceptable physical properties and processing latitude. The addition of a Geolite Modifier is necessary for the production of such low-index foams.

## Key Features and Typical Benefits

- uses existing urethane raw materials
- provides stability for use at TDI index as low as 85
- often eliminates all ABA's
- foam properties comparable to conventional foam in most foam grades
- excellent processability compared with other soft foam technologies
- useful with varied processing technologies, including mechanical cooling

## Typical Physical Properties

Physical Form	Clear liquid
Specific Gravity, 20°C	1.14
Viscosity at 20°C, cSt	60
Vapor Pressure at 20°C, mm Hg	17.3
Flash Point °C	none
Freezing Point, °C	<-30
Solubility in Water at 20°C	Complete
Water Content, % by wt	33
TDI/Geolite Modifier 206 Ratio	3.8092/1
Hydroxyl Number, mg KOH/g	2455

Typical data are average data and actual results may vary.  
Typical data shall not be used as product specifications.

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### Foam Properties

Using Geolite Modifier 206 (with low-index, high-water formulations) typically yields foam with improved physical properties - near those obtained in conventional, lower water, ABA-based systems. In certain cases (mechanical cooling processes, for example), this technology can lead to foams with greatly improved physical properties, including compression sets. Moreover, the use of Geolite Modifier 206 allows the production of soft, ABA-free foams of many densities, ranging from less than 1.2 pcf to greater than 2.5 pcf.

### Processing Considerations

The formulated grades of foam using Geolite technology have been shown to exhibit higher reaction exotherms than conventional formulations since higher water concentrations are required. This circumstance must be addressed prior to the adoption of this technology. Lower index formulations serve to reduce this high exotherm, but higher than normal exotherms should be expected.

Geolite Modifier 206 can virtually eliminate the emission of ABA's, and when used with low-index formulations, TDI emissions may be greatly reduced.

Geolite Modifier 206 contains 33 percent water. This fact should be considered when calculating a foam formulation.

### Example Formulations

The following are example formulations utilizing Geolite Modifier 206.

Component	Parts by Weight		
Foam Grade, pcf/25% IFD	1.05/18	1.4/20	1.75/22
Polyol, 46 OH#	100	100	100
Water, Total	6.50	4.50	3.40
Water, Added	4.85	3.51	2.5
Stannous Octoate	0.19	0.20	0.24
Niax Catalyst A-133 <sup>(1)</sup>	0.27	0.33	0.37
Niax Silicone L-620 <sup>(1)</sup>	1.1	0.9	0.8
Geolite Modifier 206	5.00	3.00	2.75
TDI Index	85	90	90

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Product formulations are included as illustrative examples only. Momentive makes no representation or warranty of any kind with respect to any such formulations, including, without limitation, concerning the efficacy or safety of any product manufactured using such formulations.

Geolite Modifier 206 may also be used with various technologies that utilize CO<sub>2</sub> as an auxiliary blowing agent. The formulation below is typical to obtain a 0.85 pcf, 15 IFD foam grade. The use of Geolite Modifier 206 can result in improved processing latitude and better "hand" compared to similar foam made without Geolite Modifier 206.

Foam Grade, pcf/25% IFD	0.85/15
Polyol, 46 OH#	100
Water, Total	4.6
Water, Added	4.04
CO <sub>2</sub>	5.0
Stannous Octoate	0.2
Niax Catalyst A-133 <sup>(1)</sup>	0.27
Niax Silicone L-631 <sup>(1)</sup>	1.5
Geolite Modifier 206	2
TDI Index	95

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## GEOLITE\* Modifier 206

### Patent Status

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute the permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

### Product Safety, Handling and Storage

Customers should review the latest Material Safety Data Sheet (MSDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, and any special storage conditions required for safety. MSDS are available at [www.momentive.com](http://www.momentive.com) or, upon request, from any Momentive Performance Materials (MPM) representative. For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center. Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

### Limitations

Customers must evaluate Momentive Performance Materials products and make their own determination as to fitness of use in their particular applications.

## Emergency Service

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At sea	Radio U.S. Coast Guard in U.S. waters NCEC in International waters	+44 (0) 1235239670

For Health related calls, contact Momentive Performance Materials at +1-518-233-2500 (English only).

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DO NOT WAIT. Phone if in doubt. You will be referred to a specialist for advice.

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