

## Zotefoams ZOTEK® N B50 High Performance Nylon Foam

Category : Polymer , Thermoplastic , Nylon , Nylon 6

### Material Notes:

Zotek® N B50 is a closed cell, cross-linked polyamide-6 foam manufactured using nitrogen expansion technology to produce foams with exceptional cell size uniformity, low odor / high purity and outstanding physical attributes. Data from material conditioned for 6 days at 23°C, 50% RH. Information provided by Zotefoams

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Zotefoams-ZOTEK-N-B50-High-Performance-Nylon-Foam.php](http://www.lookpolymers.com/polymer_Zotefoams-ZOTEK-N-B50-High-Performance-Nylon-Foam.php)

Physical Properties	Metric	English	Comments
Density	0.0520 g/cc	0.00188 lb/in <sup>3</sup>	ISO 7214
Moisture Absorption at Equilibrium	2.4 %	2.4 %	ISO 760
Cell Length	0.250 mm	0.00984 in	

Mechanical Properties	Metric	English	Comments
Hardness, Shore OO	79	79	ISO 868
Tensile Strength	1.30 MPa	189 psi	ISO 1798
Elongation at Break	70 %	70 %	
Flexural Modulus	0.000200 GPa	0.0290 ksi	dry
	@Temperature 200 °C	@Temperature 392 °F	
	0.000200 GPa	0.0290 ksi	conditioned
	@Temperature 200 °C	@Temperature 392 °F	
	0.00100 GPa	0.145 ksi	dry
	@Temperature 150 °C	@Temperature 302 °F	
	0.00100 GPa	0.145 ksi	conditioned
	@Temperature 150 °C	@Temperature 302 °F	
	0.00150 GPa	0.218 ksi	conditioned
	@Temperature 100 °C	@Temperature 212 °F	
	0.00200 GPa	0.290 ksi	dry
	@Temperature 100 °C	@Temperature 212 °F	
	0.00200 GPa	0.290 ksi	conditioned
	@Temperature 0.000 °C	@Temperature 32.0 °F	

Mechanical Properties	0.00200 GPa Metric	0.290 ksi English	Comments
	@Temperature 50.0 °C	@Temperature 122 °F	
	0.00700 GPa	1.02 ksi	dry
	@Temperature 50.0 °C	@Temperature 122 °F	
	0.0100 GPa	1.45 ksi	dry
	@Temperature 0.000 °C	@Temperature 32.0 °F	
	0.0110 GPa	1.60 ksi	conditioned
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	0.0120 GPa	1.74 ksi	dry
	@Temperature -40.0 °C	@Temperature -40.0 °F	
Compressive Yield Strength	0.170 MPa	24.7 psi	ISO 7214
	@Strain 10.0 %	@Strain 10.0 %	
	0.190 MPa	27.6 psi	ISO 7214
	@Strain 25.0 %	@Strain 25.0 %	
	0.225 MPa	32.6 psi	ISO 7214
	@Strain 40.0 %	@Strain 40.0 %	
	0.280 MPa	40.6 psi	ISO 7214
	@Strain 50.0 %	@Strain 50.0 %	
Tear Strength	3.00 kN/m	17.1 pli	ISO 8067
Compression Set	12 %	12 %	24 hr recovery; ISO 7214
	@Time 79200 sec, Strain 25.0 %	@Time 22.0 hour, Strain 25.0 %	
	14 %	14 %	0.5 hr recovery; ISO 7214
	@Time 79200 sec, Strain 25.0 %	@Time 22.0 hour, Strain 25.0 %	
	24 %	24 %	24 hr recovery; ISO 7214
	@Time 79200 sec, Strain 50.0 %	@Time 22.0 hour, Strain 50.0 %	
	29 %	29 %	0.5 hr recovery; ISO 7214
	@Time 79200 sec, Strain 50.0 %	@Time 22.0 hour, Strain 50.0 %	

Thermal Properties	Metric	English	Comments
Thermal Conductivity	0.0360 W/m-K	0.250 BTU-in/hr-ft <sup>2</sup> -°F	mean temp of 0°C; ISO 8301

Thermal Properties	Metric 0.0381 W/m-K	English 0.284 BTU-in/hr-ft <sup>2</sup> -°F	Comments mean temp of 25°C; ISO 8301
	0.0405 W/m-K	0.281 BTU-in/hr-ft <sup>2</sup> -°F	mean temp of 50°C; ISO 8301
	0.0420 W/m-K	0.291 BTU-in/hr-ft <sup>2</sup> -°F	mean temp of 80°C; ISO 8301
	0.0463 W/m-K	0.321 BTU-in/hr-ft <sup>2</sup> -°F	mean temp of 130°C; ISO 8301
	0.0512 W/m-K	0.355 BTU-in/hr-ft <sup>2</sup> -°F	mean temp of 170°C; ISO 8301
Maximum Service Temperature, Air	205 °C	401 °F	
Shrinkage	<= 2.0 %	<= 2.0 %	
	@Temperature 130 °C, Time 3.60e+6 sec	@Temperature 266 °F, Time 1000 hour	
	<= 2.0 %	<= 2.0 %	
	@Temperature 160 °C, Time 36000 sec	@Temperature 320 °F, Time 10.0 hour	
	<= 2.0 %	<= 2.0 %	
	@Temperature 190 °C, Time 36000 sec	@Temperature 374 °F, Time 10.0 hour	
	<= 3.0 %	<= 3.0 %	
	@Temperature 160 °C, Time 360000 sec	@Temperature 320 °F, Time 100 hour	
<= 4.0 %	<= 4.0 %		
@Temperature 160 °C, Time 3.60e+6 sec	@Temperature 320 °F, Time 1000 hour		
<= 5.0 %	<= 5.0 %		
@Temperature 190 °C, Time 360000 sec	@Temperature 374 °F, Time 100 hour		

Descriptive Properties	Value	Comments
Flammability	Automotive: FMVSS.302	Pass at 4 mm and thicker

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China