



# ZOTEK® N

## HIGH PERFORMANCE POLYAMIDE (NYLON) FOAMS

### ZOTEK® N

ZOTEK® N B50 is closed cell, cross-linked polyamide-6 foam manufactured using Zotefoams unique production process. Available in sheet form, it can be fabricated by a variety of techniques and thermoformed into shapes.

This guidance data is for material conditioned for 6 days at 23°C, 50%RH.

Property	Test Method	Units	Typical Value
Density	ISO 845	kg m <sup>3</sup>	52
Cell Size	Internal	mm	0.25
Maximum operating temperature <sup>a</sup>	Internal	°C	+205 max
Compression stress-strain characteristics			
25% compression	ISO 7214	kPa	190
50% compression	(1st compression)	kPa	280
Tensile strength	ISO 1798	kPa	1300
Elongation		%	70
Compression set			
	ISO 1856		
(22 hrs @ 25% compression, 23°C, 1/2 hr recovery)	25 mm cell-cell	% set	14
(22 hrs @ 25% compression, 23°C, 24 hrs recovery)	25 mm cell-cell	% set	12
Flammability			
Automotive	FMVSS.302		Pass at 4 mm
	Burn rate <100 mm/min and thicker		
Thermal Conductivity			
Mean temperature of 0°C	ISO 8301	W m <sup>-1</sup> K <sup>-1</sup>	0.0360
Mean temperature of 25°C		W m <sup>-1</sup> K <sup>-1</sup>	0.0381
Mean temperature of 50°C		W m <sup>-1</sup> K <sup>-1</sup>	0.0405
Mean temperature of 80°C		W m <sup>-1</sup> K <sup>-1</sup>	0.0420
Mean temperature of 130°C		W m <sup>-1</sup> K <sup>-1</sup>	0.0463
Mean temperature of 170°C		W m <sup>-1</sup> K <sup>-1</sup>	0.0512
Equilibrium moisture content	ISO 760	Weight %	2.4



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### NOTES

#### **MATERIAL CONDITION**

The data presented above is the result of testing carried out on material conditioned for 6 days at 23°C, 50%RH. Results for samples conditioned at other temperatures and relative humidity would be expected to show some variation.

#### **<sup>b</sup>GUIDANCE DATA**

The most current guidance data is published on our website [www.zotefoams.com](http://www.zotefoams.com)

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#### **<sup>a</sup>MAXIMUM OPERATING TEMPERATURE**

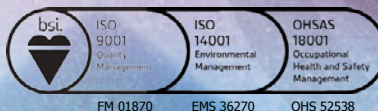
The Maximum Operating Temperature is defined as that temperature which will typically cause a linear shrinkage of 5% after a 24 hr exposure period, using a sample of 100 x 100 x 25mm.

The degree of shrinkage varies with material type and density, temperature, exposure period, sample dimensions and cell size. Other temperatures may prove to be limiting depending on the particular application requirements.

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