

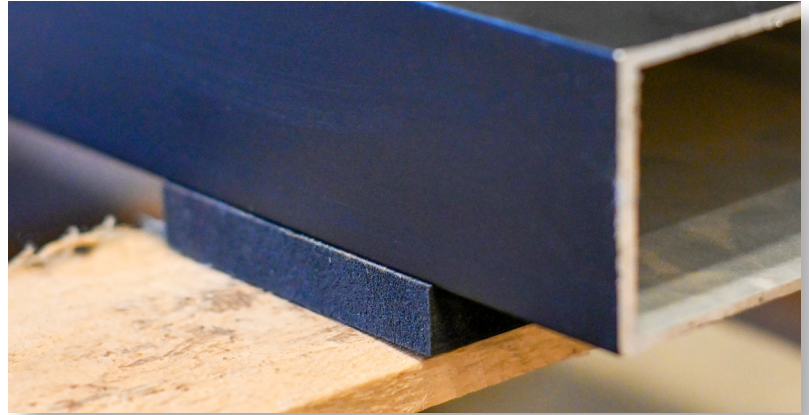


Zialoc Bunking Pads - Polyurethane Foam

Zialoc Bunking Pads are specialized protective cushions designed to safeguard metal and glass surfaces during transportation. These pads are crafted from durable, non-abrasive materials that provide cushioning to prevent scratches, dents, and other damage. They are ideal for securing items like glass panels, metal sheets, and other delicate materials, ensuring that surfaces remain intact and unblemished throughout transit. Easy to apply and remove, Zialoc Bunking Pads offer a reliable solution for preserving the quality and integrity of valuable items during shipping and handling.

Features:

- Adhesive-backed polyurethane foam
- Protects units during transport
- Keeps units from shifting and getting damaged
- Adhesive available on one or both sides
- Suitable for die-cutting
- Long-term performance
- Excellent energy management
- Extremely durable



Product Specifications

PROPERTY	TEST METHOD	VALUE
PHYSICAL		
Density, kg/m ³ (lb./ft ³)	ASTM D3574-95, Test A	240 (15), 320 (20), 480 (30)
Tolerance, %		± 10
Thickness, mm (inches)		4.78-12.70 (0.188-0.500), 1.57-3.18 (0.062-0.125), 0.79-1.14 (0.031-0.045)
Tolerance, %		± 10, ± 10, ± 20
Standard Color		Black
Compression Force Deflection, kPa (psi)		
Range kPa (psi)	0.51 cm/min (0.2"/min) Strain Rate Force Measured @ 25% Deflection	55-97 (8-14), 90-159 (13-23) 207-415 (30-60)
Typical kPa (psi)		69 (10), 117 (17), 269 (39)
Hardness, Durometer Shore O	ASTM D2240-97	18, 24, 55
Shore A		13, 18, 42
Compression Set, % max	ASTM D3574-95 Test D @ 23°C (73°F)	5
	ASTM D3574-95 Test D @ 70°C (158°F)	10
	ASTM D3574-95 Test J/Test D Autoclaved 5 hrs @ 121°C (250°F)	5



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PROPERTY	TEST METHOD	VALUE
PHYSICAL		
Dimensional Stability, % max change	22 hrs @ 80°C (176°F) in a Forced-Air Oven	± 1
Tensile Strength, min. kPa (psi)	ASTM D3574-75 Test E	482 (70), 829 (120), 1382 (200)
Tensile Elongation, % min.	ASTM D3574-75 Test E	100, 100, 90
Tear Strength, min. kN/m, (pli)	ASTM D264-91 Die C	1.1 (6), 1.8 (10), 2.3 (13)
Typical kNm, (pli)		2.1 (12), 2.8 (16), 4.2 (24)
ELECTRICAL & THERMAL		
Dielectric Constant, K' ("DK")	ASTM D150 @ 22°C (72°F) Relative Humidity 50% for 24 hrs	1.63
Dielectric Strength, kV/m (volts/mil)	ASTM D149-97a	1969 (50)
Dissipation Factor, tan D ("DF")	ASTM D150-98	0.05
Volume Resistivity, ohm-cm (ohm-in)	ASTM D257-99	2 x 10 ¹² (7.87 x 10 ¹¹)
Surface Resistivity, ohm/sq.	ASTM D257-99	7 x 10 ¹²
Thermal Conductivity, W/m-C	ASTM C518-98	-, 0.090, -
(BTU-in./hr/ft ² -F)		-, (0.063), -
Coefficient of Thermal Expansion		2.3 - 3.1 x 10 ⁻⁴ in/in/°C (1.3 - 1.7 x 10 ⁻⁴ in/in/°F)
TEMPERATURE RESISTANCE		
Recommended Constant Use, max.	SAE J-2236	90°C (194°F)
Recommended Intermittent Use, max.		121°C (250°F)
Embrittlement	ASTM D746-98	-40°C (-40°F)
Cold Flexibility	MIL-P-12420D 1991 @ -40°C (-40°F)	Pass
FLAMMABILITY & OUTGASSING		
Flammability, mm (inches)	UL 94HBF ^s (File E20305) (Pass ≥)	3.175 (0.125), 1.6 (0.062), -
	FMVSS 302 (Pass ≥)	4.8 (0.188), 1.6 (0.062), 1.1 (0.045)
	CSA Comp HBF (File 188149) (Pass ≥)	4.8 (0.188), 1.6 (0.062), -
Fogging	SAE J-1756 3 hrs @ 100°C (212°F)	Pass
Outgassing, Total Mass Loss (TML) %	ASTM E595-93 24 hrs @ 125°C (257°F) @ <7 kPa (1.02 psi)	0.6, 0.8, 0.9
Outgassing, Collected Volatile Condensable Materials (CVCM) %		0.04, 0.05, 0.06
Outgassing, Water Vapor Regain (WVR) %		0.1, 0.3, 0.4

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PROPERTY	TEST METHOD	VALUE
ENVIRONMENTAL		240 (15), 320 (20), 480 (30)
Moisture Absorption, High Humidity Exposure, % Weight Gain, Typical	AMS 3568-95	2
Water Absorption, Immersion Testing, % Weight Gain, Typical	ASTM D570-95	13, 8, 5
UV Resistance	ASTM G53-96	Good
Ozone Resistance	GM 4486P-95	Pass
Corrosion Resistance	AMS 3568-91	Pass
Mildew/Bacteria Resistance	ASTM G21	Good
Staining	ASTM D925	No Stain

§Designed to meet UL 94 HBF based upon 2022 test criteria. As of 2023 items with nominal density $\geq 15.6\text{lb/ft}^3$ (250kg/m^3) are no longer eligible to be tested for UL 94 HBF but remain equivalent.

- - Represents testing not available at this time
- All metric conversions are approximate
- Additional technical information is available
- Typical values should not be used for specification limits