

Product Description

ISOLOSS™ LS Foams are microcellular, open-cell, polyether polyurethane foams with a low compression set. The foam chemistry offers a unique combination of features for gasketing, sealing, cushioning, and energy control design challenges. ISOLOSS™ LS products exhibit very low compression set and excellent resistance to collapse as well as good shock absorption and vibration isolation performance. They also feature low outgassing and good dimensional stability.

ISOLOSS™ LS foams provide excellent shock control and cushioning, yet are durable enough for gasketing, padding and sealing applications.

- Low compression set
- High energy absorption
- Effective vibration isolation
- Low outgassing
- High internal strength
- Chemical resistance
- Flame resistance
- Broad service temperature range

* ISOLOSS™ LS Polyurethane Foams LS-20xx and LS-25xx were previously listed with an HBF UL 94 flammability rating. UL now requires foam with a density >250 kg/m³ to meet a HB Horizontal test and material does not meet this standard.

TYPICAL PROPERTIES				
PROPERTY	LS-10xxLM	LS-15xx	LS-20xx	LS-25xx
Density Nominal kg/m³ (lb/ft³) ASTM D3574	160 (10)	240 (15)	320 (20)	400 (25)
Thickness Range (mm/in) Tolerance Liner	.76 - 12.7 (.03 - 0.50) (Thickness options vary by density.) ±15% for thicknesses 0.09"+; ±20% for 0.06"; and ±35% for 0.03" Material supplied on a 6.5 mil PCK Liner			
Flammability UL 94	Listed HBF @ .24"+	Listed HBF @ .12" - 37"	*	*
Hardness ASTM D2240 Durometer 15 second post impact, Type O 15 second post impact, Type OO	3 27	12 50	19 58	21 62
Volume Resistivity ASTM D257, ohms-cm	10 ¹¹	10 ¹¹	10 ¹⁰	10 ¹⁰
FMVSS-302	Meets			
Sealing Qualified for mfrd or natural gas; diesel fuel or lubricating oil; liquidified petroleum gas; under UL 157 test standards UL 50 UL 508 UL 514B	Listed Listed Listed	Listed Listed Listed	Listed Listed Listed	Listed Listed Listed
Compression Set (%) (50% compression) ASTM D1667 22 hours at 23°C (73°F) ASTM D3574 22 hours at 70°C (158°F)	<1 <3			
Compression Load Deflection kPa (psi) ASTM D3574, Deflection: 10% kPa (psi) 20% kPa (psi) 30% kPa (psi) 40% kPa (psi) 50% kPa (psi) 60% kPa (psi) 70% kPa (psi)	13 (1.9) 18 (2.6) 21 (3.1) 27 (3.9) 37 (5.3) 56 (8.2) 108 (15.6)	30 (4.3) 44 (6.3) 55 (7.9) 71 (10.3) 99 (14.3) 155 (22.5) 306 (44.4)	50 (7.2) 79 (11.4) 102 (14.8) 134 (19.5) 189 (27.3) 301 (43.7) 637 (92.3)	71 (10.2) 113 (16.4) 150 (21.8) 198 (28.7) 280 (40.6) 459 (66.6) 1042 (151.2)
Tensile Strength kPa (psi) ASTM D3574	496 (72)	613 (89)	756 (110)	933 (135)
Tear Strength kN/m (lbf/in) ASTM D624	2.6 (14.6)	3.0 (17.1)	3.5 (20.0)	4.1 (23.5)
Thermal Conductivity - K Value ASTM C518 W/m*K (BTU in/hr ft ² F) Test results based on 0.12" foam	0.055 (0.36)	0.067 (0.46)	0.08 (0.56)	0.089 (0.62)
Temperature Range °C (°F) Normal Operating	-40°C to 107°C (-40°F to 225°F)			
Recommended Maximum Intermittent	120°C (248°F)			
Cold Flexibility AMS D3568 4 hours at -18°C (0°F)	Passes			
Brittleness Temperature °C (°F) ASTM D746	-40°C (-40°F)			
Outgassing ASTM E595 Modified per Ball Aerospace; BASG 33074 24 hours at 10-5 Torr & 70°C (158°F), Weight Loss, % Volatile Condensable Material, %			1.7 0.9	
Corrosion Resistance AMS D3568	Excellent			
Dielectric Strength V/mil (kV/mm); ASTM D149	60 (2)			
RoHS Directive 2015/863/ EU Compliant	Yes			

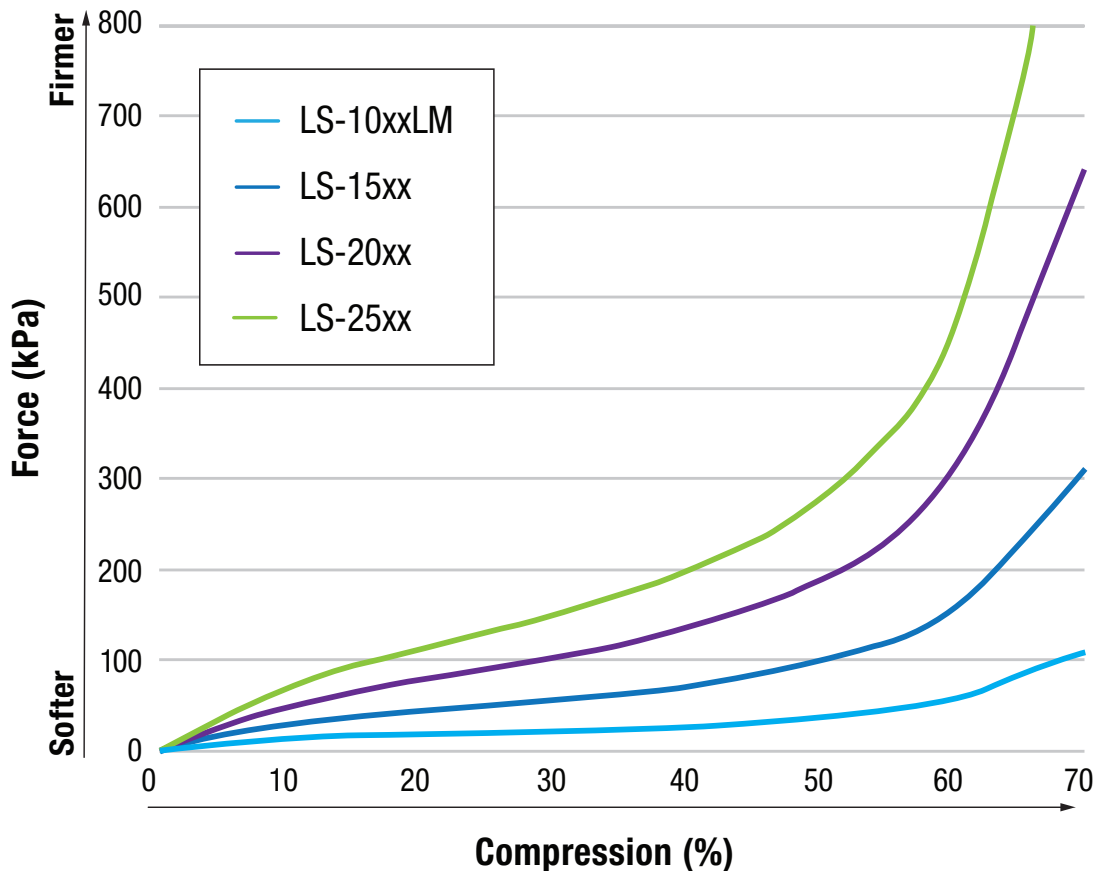


Thickness and Density Options Listed Below

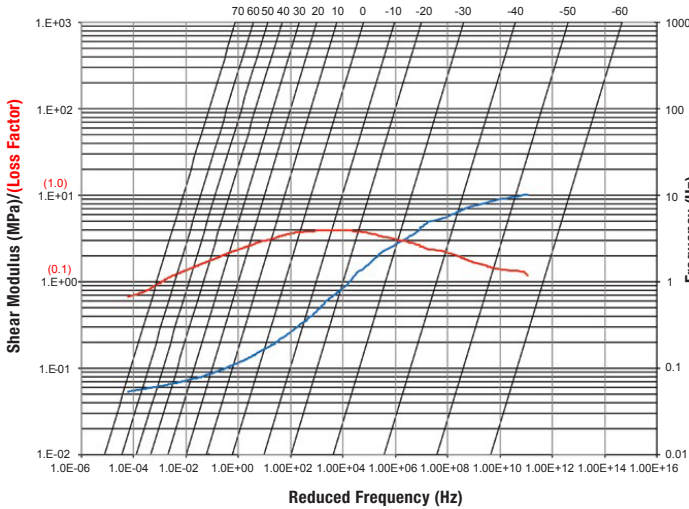
Thickness (inches)	Density (lb/ft ³)			
	LS-10xxLM	LS-15xx	LS-20xx	LS-25xx
0.03			LS-2003	LS-2503
0.06	LS-1006LM	LS-1506	LS-2006	LS-2506
0.09	LS-1009LM	LS-1509	LS-2009	LS-2509
0.12	LS-1012LM	LS-1512	LS-2012	LS-2512
0.19	LS-1019LM	LS-1519	LS-2019	LS-2519
0.25	LS-1025LM	LS-1525	LS-2025	LS-2525
0.37	LS-1037LM	LS-1537		
0.50	LS-1050LM	LS-1550		

Check with your local representative for a list of available thicknesses.

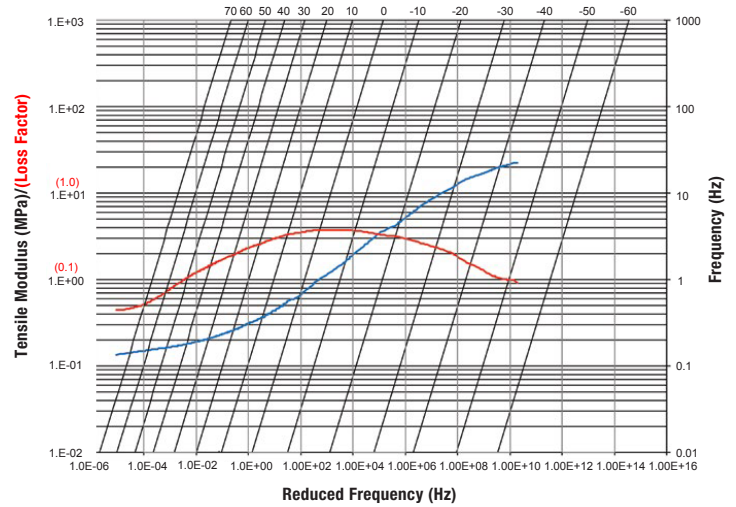
ISOLOSS™ LS - COMPRESSION FORCE DEFLECTION



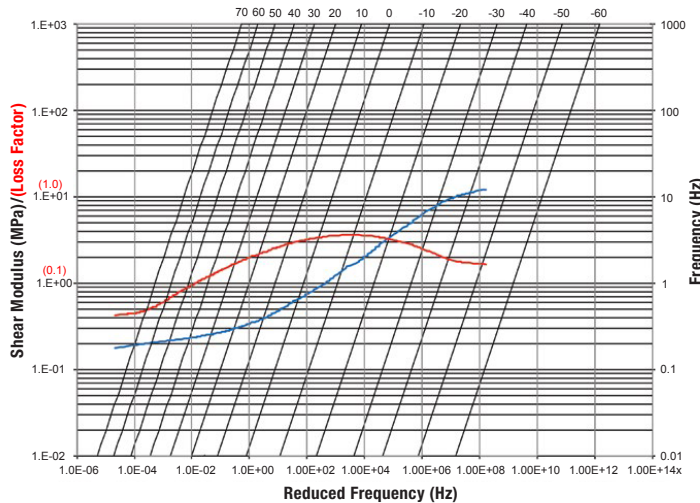
ISOLOSS™ LS-1019LM



ISOLOSS™ LS-1512



ISOLOSS™ LS-2012



Technical Information

The data listed in this data sheet are typical or average values based on tests conducted by independent laboratories or by the manufacturer. They are indicative only of the results obtained in such tests and should not be considered as guaranteed maximums or minimums. Materials must be tested under actual service to determine their suitability for a particular purpose.

Warranty, Limited Remedy, and Disclaimer

Unless an additional warranty is specifically stated on the applicable Aearo Technologies product packaging or product literature, Aearo Technologies warrants that each Aearo Technologies product meets the applicable Aearo Technologies product specification at the time Aearo Technologies ships the product. Aearo Technologies MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OF TRADE. If the Aearo Technologies product does not conform to this warranty, then the sole and exclusive remedy is, at Aearo Technologies's option, replacement of the Aearo Technologies product or refund of the purchase price.

Limitation of Liability

Except where prohibited by law, Aearo Technologies will not be liable for any loss or damage arising from the Aearo Technologies product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.