



Shock, Noise and Vibration Solutions

Electronic Materials Brochure



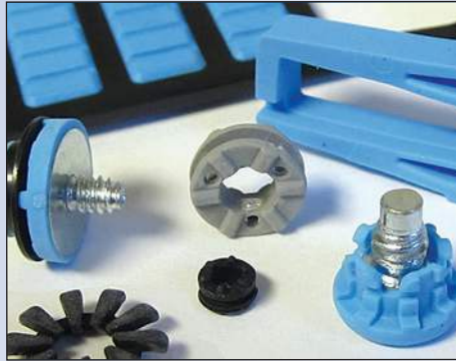
Aearo Technologies LLC • a 3M company





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ISODAMP™ C-8000 MATERIALS

- Highly damped thermoplastic molded products for noise, shock and vibration control
- RoHS compliant
- JIG-101 compliant
- Non-halogenated
- Listed UL 94 V-0 flame rating
- Available in durometers from 40 to 88 Type A



ISOLOSS™ SL MATERIALS

- Highly damped thermoset molded products for noise, shock and vibration control
- RoHS compliant
- JIG-101 compliant
- Non-halogenated
- Available in durometers from 20 to 60 Type A
- Available in listed UL 94 and non-listed formulations



CONFOR™ EG FOAMS

- Highly compliant shock and energy absorbing, strain-rate sensitive, open-cell foam products
- Listed UL 94 HF-1 flame rating
- RoHS compliant
- JIG-101 compliant
- Non-halogenated
- Available in a range of stiffnesses and parts



CONFOR™ SC FOAMS

- Small cell, slow-recovery foam that can be easily compressed up to 95% for shock protection and gasketing in tight spaces.
- Low compression set
- Highly comformable gap filler
- Listed HF-1 @ 0.5mm-3.0mm
- RoHS Compliant and non-halogenated
- JIG-101 Compliant

Typical Properties

Property	C-8012	C-8002	C-8070	C-8130
Description	TPE Solid Thermoplastic	TPE Solid Thermoplastic	TPE Solid Thermoplastic	TPE Solid Thermoplastic
Hardness ASTM D2240 Type A Durometer 23C (73F) 15 sec impact	40	51	70	88
Compression Load Deflection kPa (psi) ASTM D575 at 0.51 cm/min (0.2 in/min)				
10% kPa (psi)	324 (47)	455 (66)	951 (138)	3619 (525)
20% kPa (psi)	627 (91)	883 (128)	1799 (261)	6494 (942)
30% kPa (psi)	958 (139)	1358 (197)	2799 (406)	9087 (1318)
Compression Set (%) ASTM D395 Method B				
22 hr at 22C (72F)	12	15	15	35
22 hr at 70C (158F)	100	99	98	90
Tensile Strength kPa (psi) ASTM D412	3309 (480)	5309 (770)	10059 (1459)	11279 (1636)
Tear Strength kN/m (lbf/in) ASTM D624	18 (100)	25 (141)	50 (285)	72 (410)
Temperature Range C (F) Peak Damping Performance Temperature Range				
@ 10 Hz	-26 to 22	-6 to 37	4 to 42	5 to 27
@ 100 Hz	-19 to 35	-2 to 50	8 to 53	10 to 34
@ 1000 Hz	-13 to 55	4 to 71	14 to 68	16 to 41

The above technical information and data should be considered representative or typical only and should not be used for specification purpose.

Environmental Properties

Property	C-8012	C-8002	C-8070	C-8130
Flammability UL 94	Listed V-0 @ 6 mm (0.24in)	Listed V-0 @ 3.4 mm (0.13 in)	Meets V-0 @ 3.2mm (0.125 in)	Listed V-0 @ 3.5 mm (0.14 in)
RoHS Compliant	Yes	Yes	Yes	Yes
Halogen Free*	Yes	Yes	Yes	Yes

Halogen-free per IEC 61249-2-21.



Toll-free hotline

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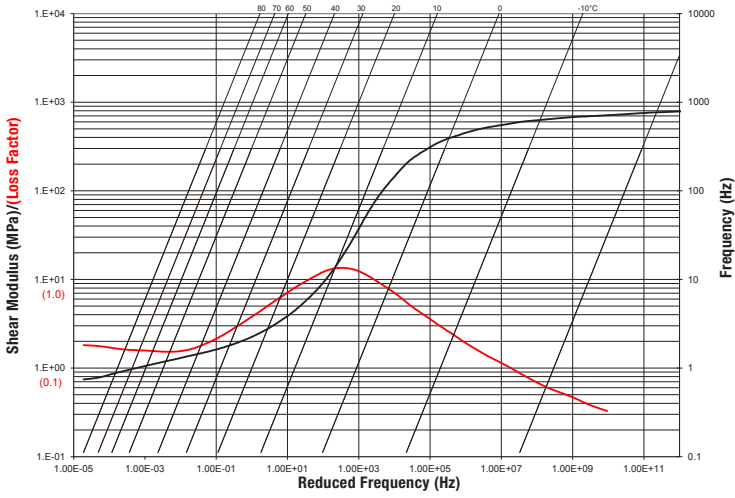
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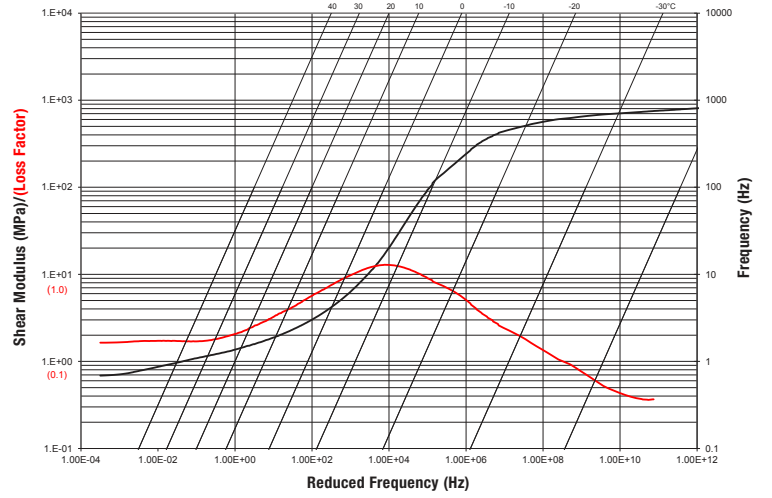
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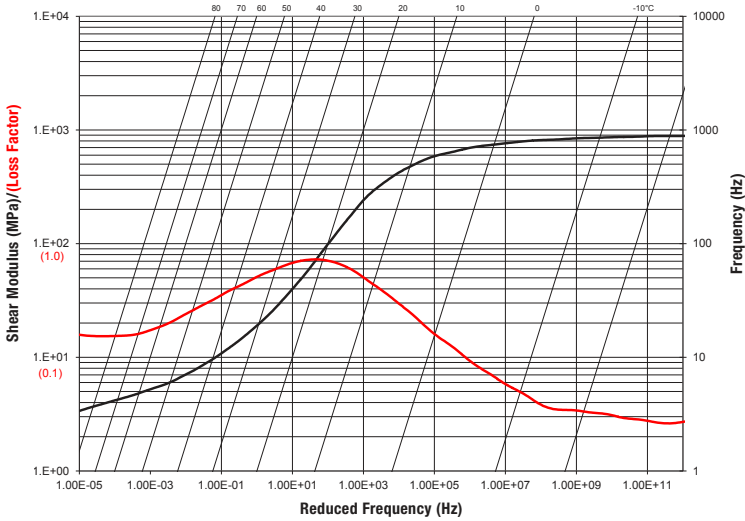
ISODAMP C-8002



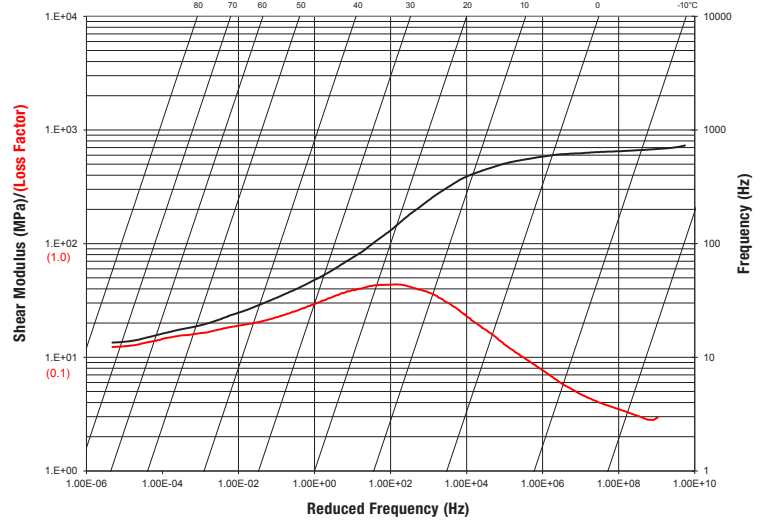
ISODAMP C-8012



ISODAMP C-8070



ISODAMP C-8130



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Typical Properties

Property	SL-20300	SL-35300	SL-50300	SL-60300
Description	Synthetic Rubber	Synthetic Rubber	Synthetic Rubber	Synthetic Rubber
Hardness ASTM D2240 Type A Durometer 23C (73F) 15 sec impact	19	30	45	56
Compression Load Deflection kPa (psi) ASTM D575 at 0.51 cm/min (0.2 in/min)				
10% kPa (psi)	117 (17)	193 (28)	338 (49)	517 (68)
20% kPa (psi)	221 (32)	379 (55)	669 (97)	1013 (132)
30% kPa (psi)	352 (51)	607 (88)	1096 (159)	1689 (222)
Compression Set (%) ASTM D395 Method B 22 hr at 22C (72F) 22 hr at 70C (158F)	3 7	4 6	2 7	3 4
Tensile Strength kPa (psi) ASTM D412	4185 (600)	5667 (822)	10149 (1472)	10721 (1555)
Tear Strength kN/m (lbf/in) ASTM D624	11.4 (65)	20.1 (115)	18.9 (108)	24.15 (138)
Temperature Range C Peak Damping Performance Temperature Range				
@ 10 Hz	-23 to 29	-21 to 30	-5 to 42	-10 to 35
@ 100 Hz	-18 to 47	-16 to 47	-2 to 63	-4 to 47
@ 1000 Hz	-14 to 71	-12 to 72	4 to 82	1 to 60

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Environmental Properties

Property	SL-20300	SL-35300	SL-50300	SL-60300
Flammability UL 94	Listed HB @ 2.3mm-2.5mm	Listed HB @ 3.0mm	Listed HB @ 3.0mm	Listed HB @ 3.0mm
RoHS Compliant	Yes	Yes	Yes	Yes
Halogen Free*	Yes	Yes	Yes	Yes

*Halogen-free per IEC 61249-2-21.



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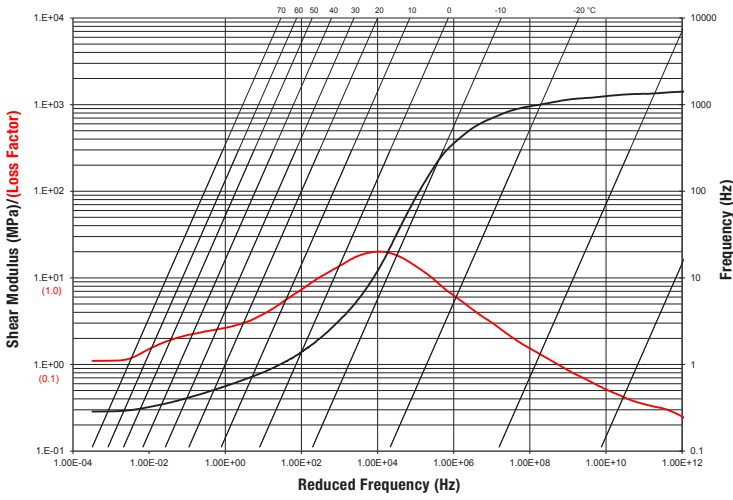
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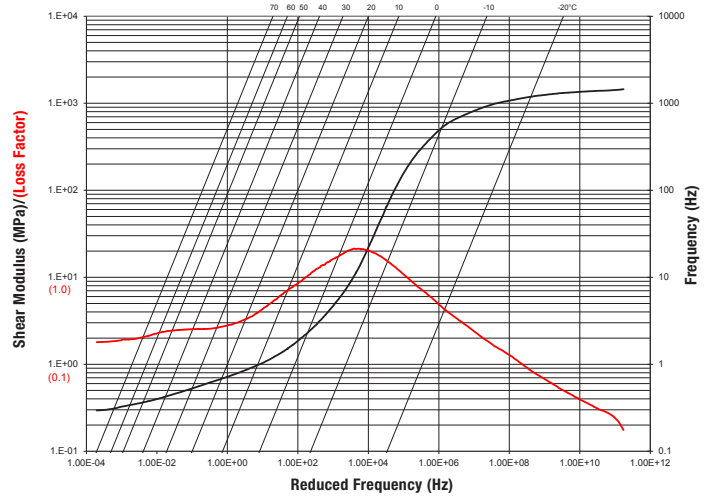
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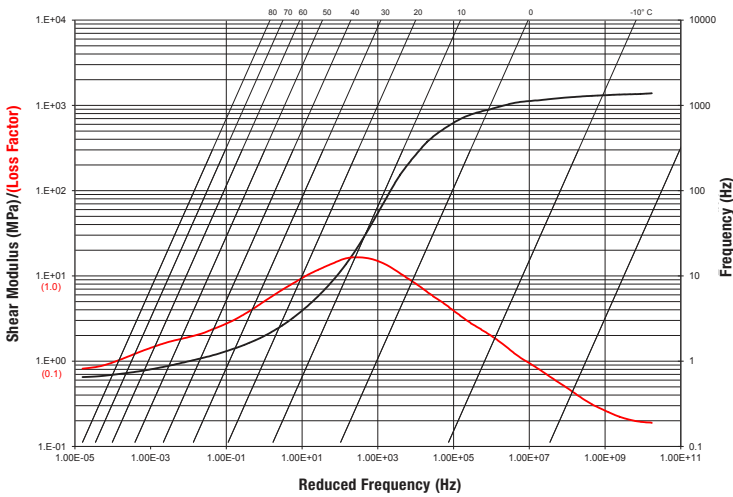
ISOLOSS SL-20300



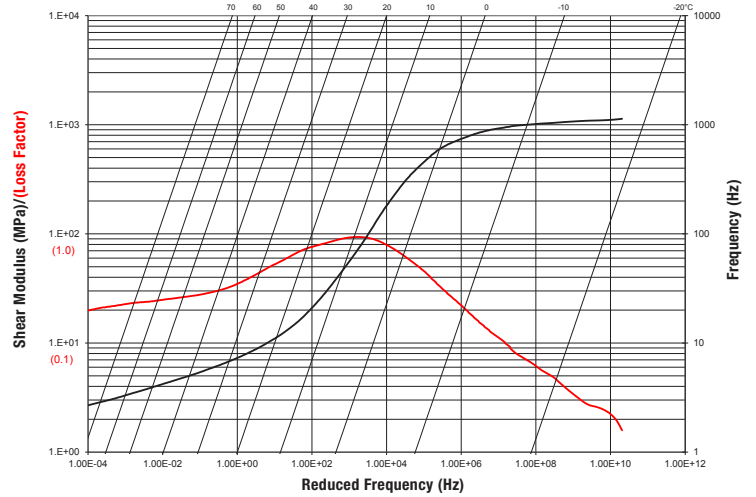
ISOLOSS SL-35300



ISOLOSS SL-50300



ISOLOSS SL-60300



Typical Properties

Property	CFNT-EGS	CF-40EG	CF-42EG	CF-45EG	CF-47EG
Density Nominal kg/m³ (lb/ft³) ASTM D3574	83 (5.18)	96.1 (6)	96.1 (6)	96.1 (6)	96.1 (6)
Ball Rebound % ASTM D3574	< 1	< 1	< 1	< 1	< 1
Thermal Conductivity – K Value ASTM C518 W/m*K (BTU in/hr ft ² F)	.0039 (0.27)	.0039 (0.27)	.0040 (0.28)	.0040 (0.27)	.0039 (0.27)
Compression Set (%) ASTM D357 22hr @ 22C (72 F), Compressed 50%	< 1	< 1	< 1	< 1	< 1
Indentation Force Deflection ASTM D3574 Test B1 Modified 25% Deflection for 12" x 12" x 2" sample 22C (72F) @ 50% Relative Humidity (lbf)	10-17	15-28	29-41	42-55	55-70
Tensile Strength kPa (psi) ASTM D3574 5.1mm/min (20 in/min)	48 (6.7)	53 (7.7)	90 (13)	129 (19)	229 (33)
Tear Strength kN/m (lbf/in) ASTM D3574 5.1 mm/min (20 in/min) @ 22C (72F)	0.28 (1.6)	0.32 (1.8)	0.56 (3.2)	0.63 (3.6)	1.1 (6.5)
Tg (Peak Loss Modulus), °C DMA, 10 Hz & 0.3 amplitude, 30% compression	-2.5	2.7	6.7	14	19
Peak Tan Delta @ Temp C (F) DMA, 10 Hz & 0.3 amplitude, 30% compression	1.34 @ 22 C	1.33 @ 26 C	1.26 @ 30 C	1.17 @ 39 C	1.07 @ 46 C
Compression Load Deflection ASTM D 3574C Modified*					
Force @ 10% Compression kPa (psi)	0.83 (0.12)	1.65 (0.24)	2.83 (0.41)	3.03 (0.44)	6.89 (1.00)
Force @ 20% Compression kPa (psi)	1.1 (0.16)	1.86 (0.27)	2.90 (0.42)	3.59 (0.52)	6.89 (1.00)
Force @ 30% Compression kPa (psi)	1.2 (0.18)	2.07 (0.30)	3.31 (0.48)	4.0 (0.58)	7.58 (1.08)
Force @ 40% Compression kPa (psi)	1.5 (0.22)	2.41 (0.35)	3.93 (0.57)	4.76 (0.69)	8.96 (1.27)
Force @ 50% Compression kPa (psi)	1.8 (0.26)	3.03 (0.44)	4.96 (0.72)	6.0 (0.87)	11.03 (1.60)
Force @ 60% Compression kPa (psi)	2.4 (0.35)	4.21 (0.61)	6.89 (1.04)	8.96 (1.25)	15.86 (2.29)
Force @ 70% Compression kPa (psi)	3.9 (0.57)	7.58 (1.1)	13.1 (1.89)	16.34 (2.37)	28.96 (4.19)
Force @ 80% Compression kPa (psi)	9.0 (1.3)	21.4 (3.09)	37.9 (5.5)	51.0 (7.42)	89.63 (13.0)

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* 12.7mm thick specimen compressed at a rate of 5.1 mm/min

Environmental Properties

Property	CFNT-EGS	CF-40EG	CF-42EG	CF-45EG	CF-47EG
Flammability UL 94	Meets HBF	Listed HF-1 @ 2 mm	Listed HF-1 @ 2 mm	Listed HF-1 @ 2 mm	Listed HF-1 @ 2 mm
RoHS Compliant	Yes	Yes	Yes	Yes	Yes
Halogen Free*	Yes	Yes	Yes	Yes	Yes

*Halogen-free per IEC 61249-2-21.



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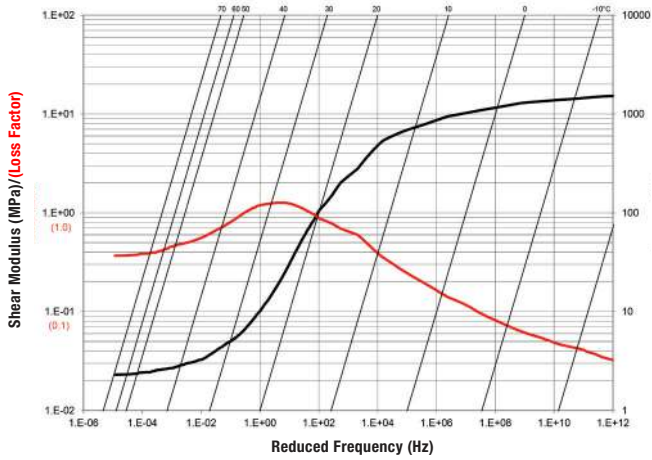
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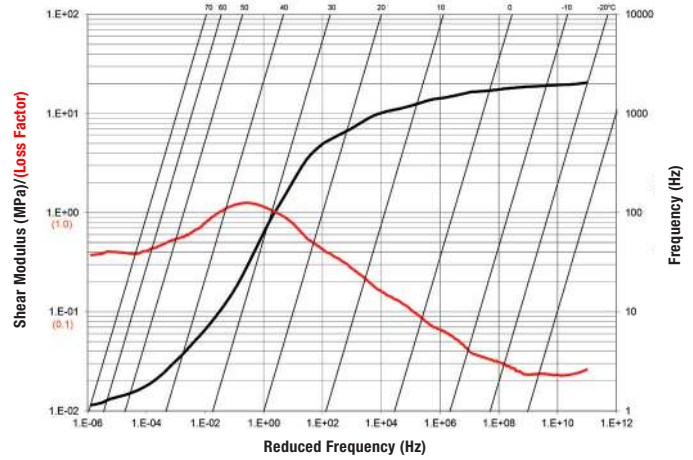
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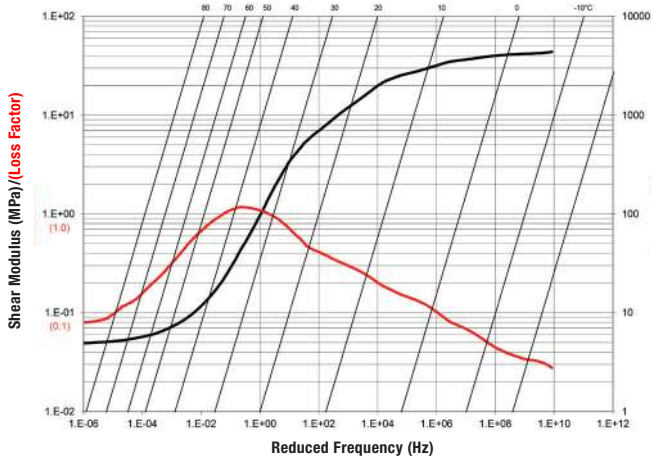
CF-40EG



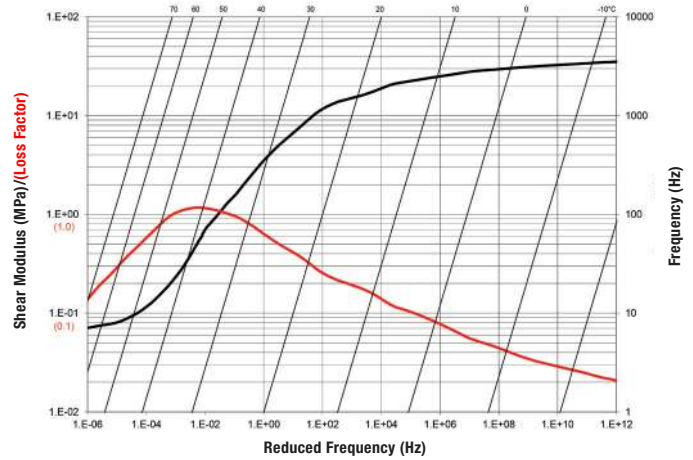
CF-42EG



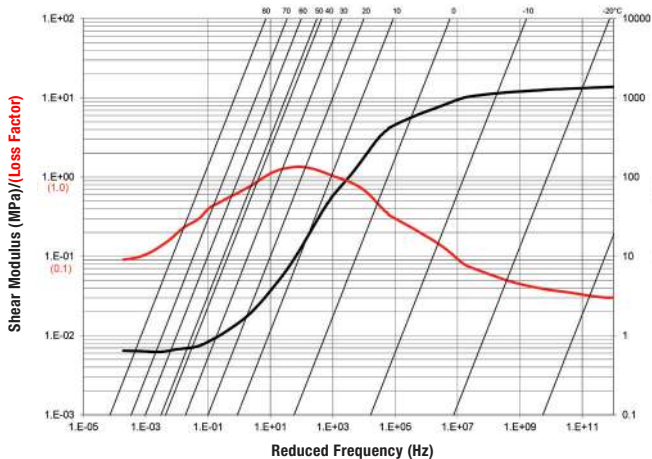
CF-45EG



CF-47EG



CFNT-EGS



Typical Properties

Property	CF-42SC	CF-47SC
Density Nominal kg/m3 (lbs/ft3) ASTM D 3574-03 Test A	101 kg/m3 (6.3 lbs/ft.³)	101 kg/m3 (6.3 lbs/ft.³)
Tensile Strength kPa (psi) ASTM D 3574-03 Test E	131 (19.1)	288.82 (41.89)
Tear Resistance kN/m (lbf/in) ASTM D 3574-03 Test F	0.53 (3.0)	1.26 (7.19)
Elongation ASTM D 3574-03 Test F	181%	142%
Compression Set (%) ASTM D3574-03 Test D- 50% Compression 22 hr at 22C (72F) 22 hr at 60C (140F)	<2%	<1% <1%
Compression Load Deflection kPa (psi) ASTM D3574-03 Test C Modified		
@ 10% Deflection	3.22 (0.47)	12.4 (1.80)
@ 20% Deflection	3.64 (0.53)	13.5 (1.96)
@ 30% Deflection	4.17 (0.60)	13.9 (2.02)
@ 40% Deflection	4.98 (0.72)	15.8 (2.30)
@ 50% Deflection	6.30 (0.91)	19.8 (2.87)
@ 60% Deflection	8.73 (1.30)	27.6 (4.00)
@ 70% Deflection	14.8 (2.10)	48.8 (7.07)
@ 80% Deflection	39.8 (5.80)	147.0 (21.30)
Dust Resistance IEC 60529-Category 2 50% Compression 70% Compression	IP 5X Rating Dust Proof Dust Proof	IP 5X Rating Dust Proof Dust Proof

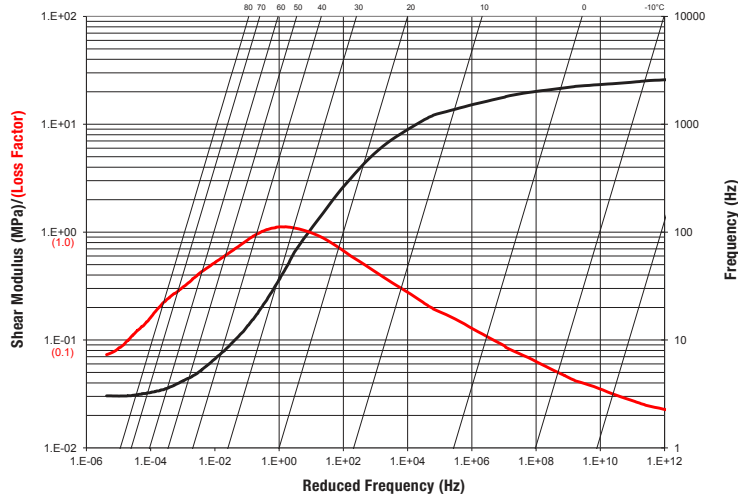
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Environmental Properties

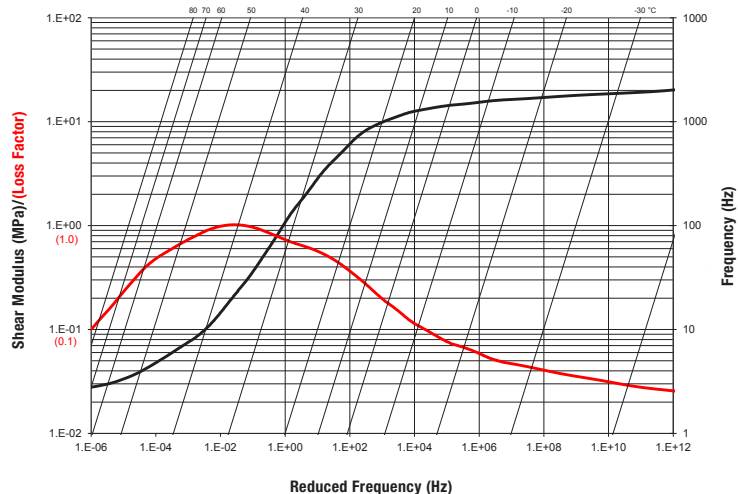
Property	CF-42SC	CF-47SC
Flammability UL 94	Listed HF-1 @ 0.5 mm – 3.0mm	Meets HF-1 @ 1.6 mm – 3.5mm
RoHS Compliant	Yes	Yes
Halogen Free*	Yes	Yes

*Halogen-free per IEC 61249-2-21.

CF-42 SC



CF-47 SC



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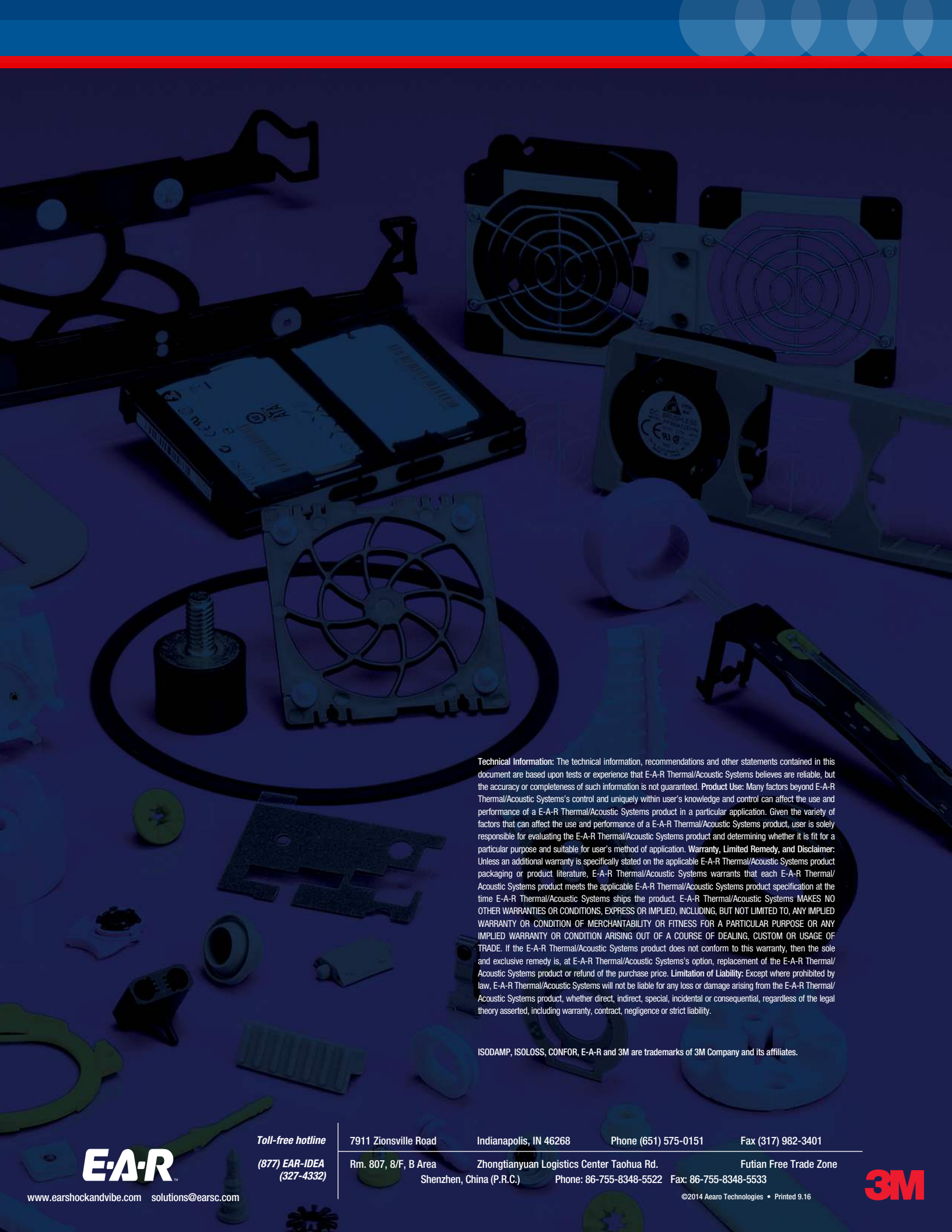
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