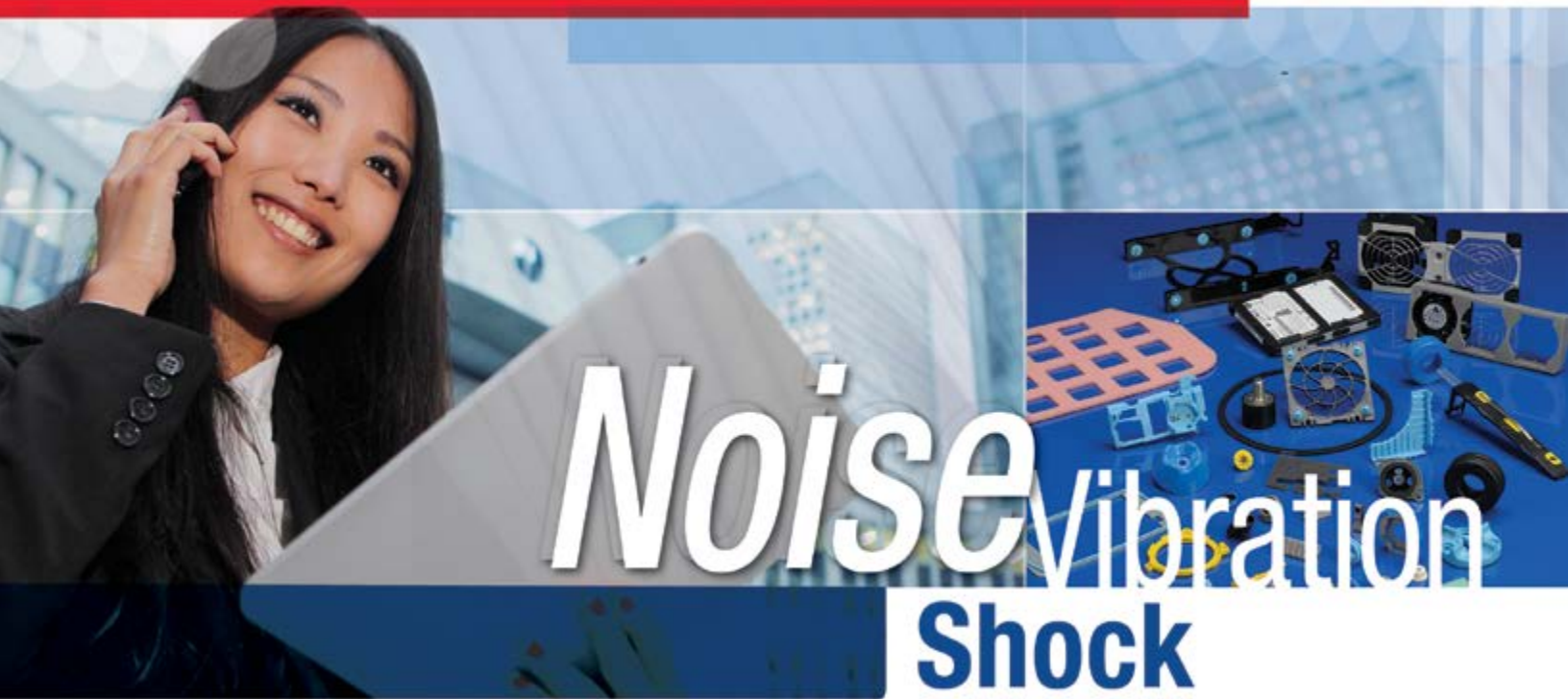




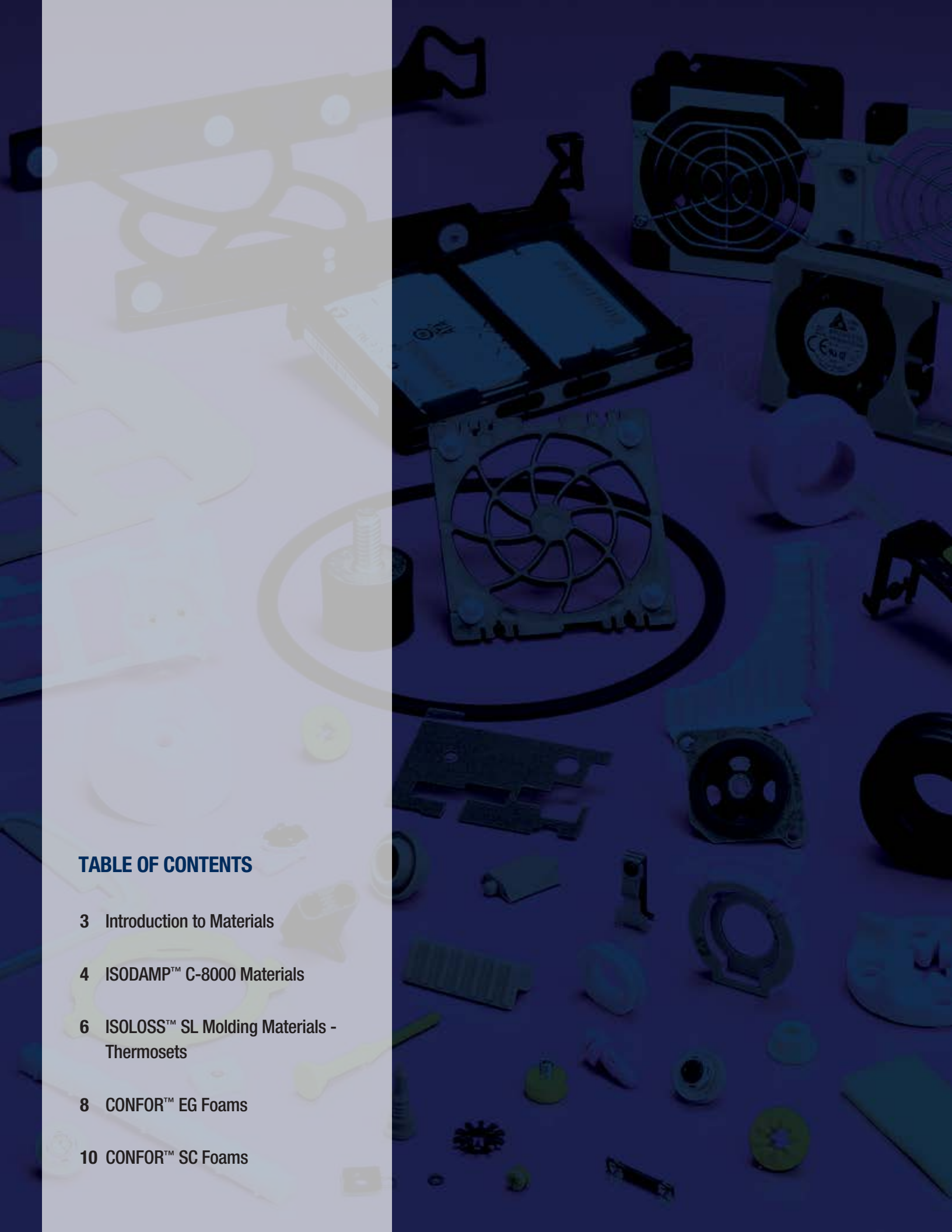
Shock, Noise and Vibration Solutions

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 conformable 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                          |
|---------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------|--------------------------------|---------------------------------|
| <b>Description</b>                                                                                                  | TPE Solid Thermoplastic             | TPE Solid Thermoplastic         | TPE Solid Thermoplastic        | TPE Solid Thermoplastic         |
| <b>Hardness</b><br>ASTM D2240<br>Type A Durometer 23C (73F)<br>15 sec impact                                        | 40                                  | 51                              | 70                             | 88                              |
| <b>Compression Load Deflection kPa (psi)</b><br>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)                     |
| <b>Compression Set (%)</b><br>ASTM D395 Method B<br>22 hr at 22C (72F)<br>22 hr at 70C (158F)                       | 12<br>100                           | 15<br>99                        | 15<br>98                       | 35<br>90                        |
| <b>Tensile Strength kPa (psi)</b><br>ASTM D412                                                                      | 3309<br>(480)                       | 5309<br>(770)                   | 10059<br>(1459)                | 11279<br>(1636)                 |
| <b>Tear Strength kN/m (lbf/in)</b><br>ASTM D624                                                                     | 18<br>(100)                         | 25<br>(141)                     | 50<br>(285)                    | 72<br>(410)                     |
| <b>Temperature Range C (F)</b><br>Peak Damping Performance<br>Temperature Range<br>@ 10 Hz<br>@ 100 Hz<br>@ 1000 Hz | -26 to 22<br>-19 to 35<br>-13 to 55 | -6 to 37<br>-2 to 50<br>4 to 71 | 4 to 42<br>8 to 53<br>14 to 68 | 5 to 27<br>10 to 34<br>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                           |
|------------------------------|-------------------------------|----------------------------------|---------------------------------|----------------------------------|
| <b>Flammability</b><br>UL 94 | Listed V-0<br>@ 6 mm (0.24in) | Listed V-0<br>@ 3.4 mm (0.13 in) | Meets V-0<br>@ 3.2mm (0.125 in) | Listed V-0<br>@ 3.5 mm (0.14 in) |
| <b>RoHS Compliant</b>        | Yes                           | Yes                              | Yes                             | Yes                              |
| <b>Halogen Free*</b>         | Yes                           | Yes                              | Yes                             | Yes                              |

Halogen-free per IEC 61249-2-21.



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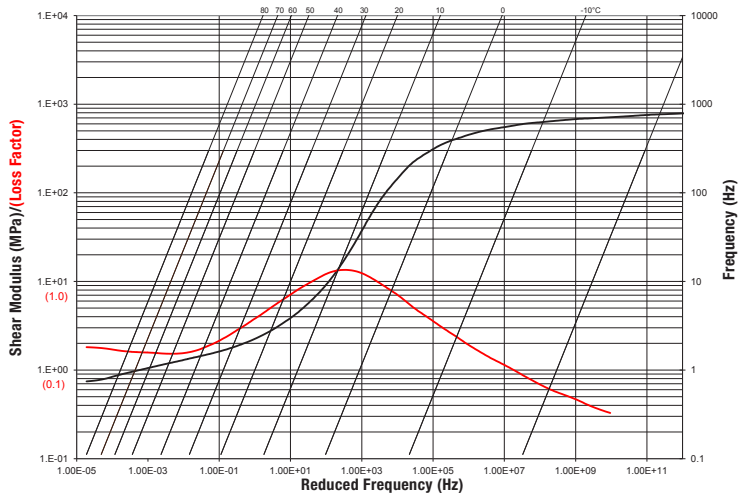
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Phone: 86-755-8348-5522

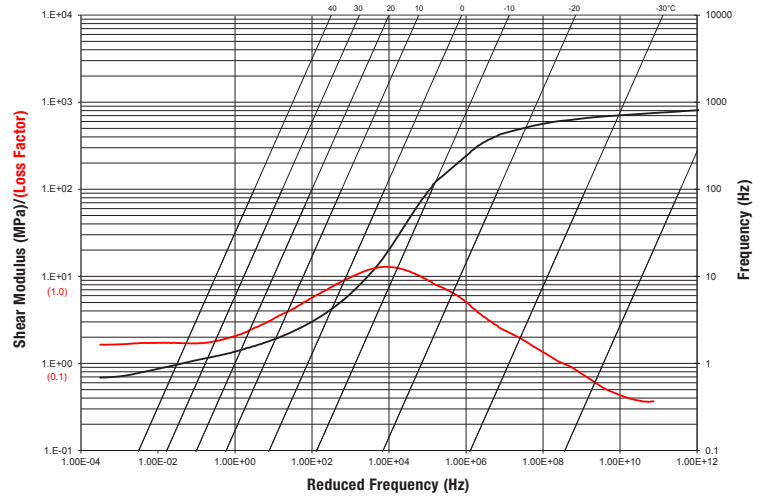
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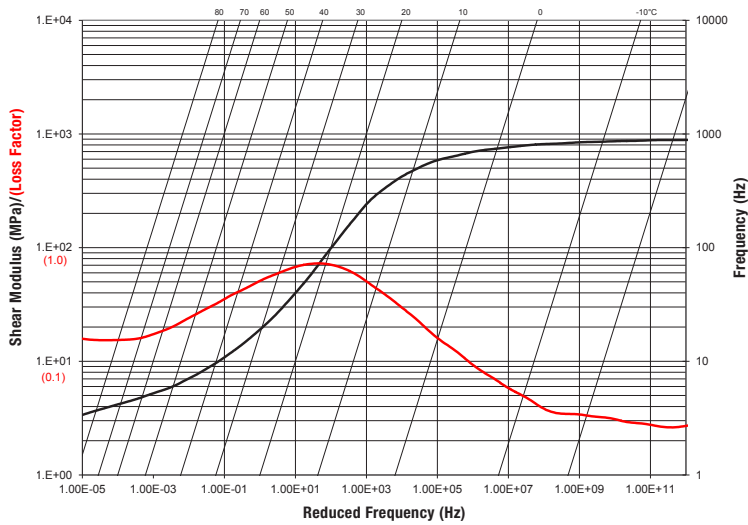
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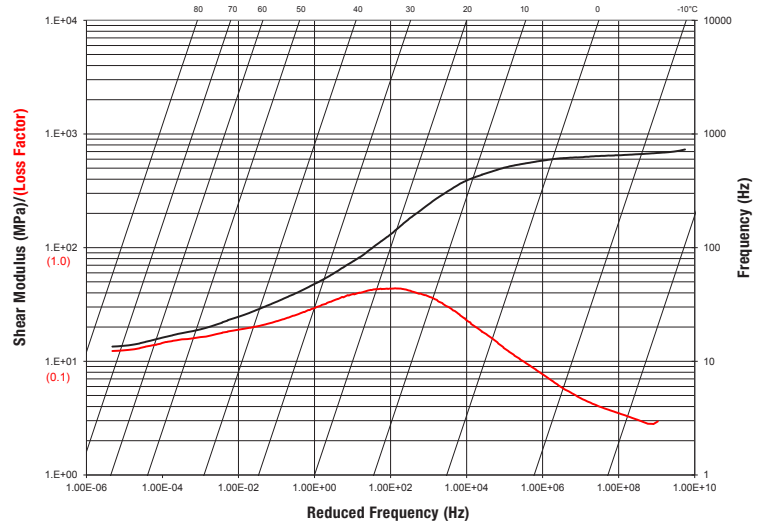
### ISODAMP C-8012



### ISODAMP C-8070



### ISODAMP C-8130



## Typical Properties

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

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

## Environmental Properties

| Property                     | SL-20300                   | SL-35300 | SL-50300             | SL-60300 |
|------------------------------|----------------------------|----------|----------------------|----------|
| <b>Flammability</b><br>UL 94 | Listed HB @<br>2.3mm-2.5mm |          | Listed HB @<br>3.0mm |          |
| <b>RoHS Compliant</b>        | Yes                        | Yes      | Yes                  | Yes      |
| <b>Halogen Free*</b>         | Yes                        | Yes      | Yes                  | Yes      |

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



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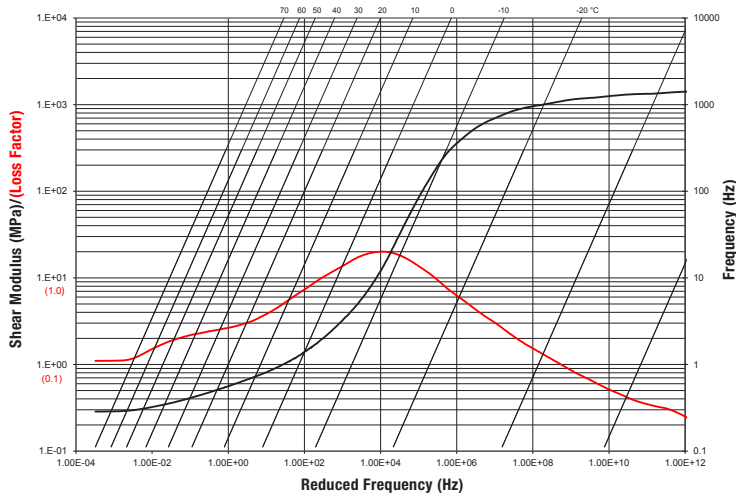
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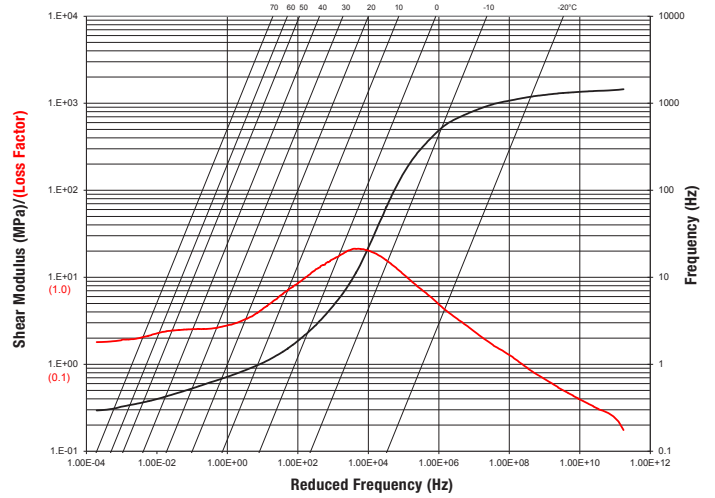
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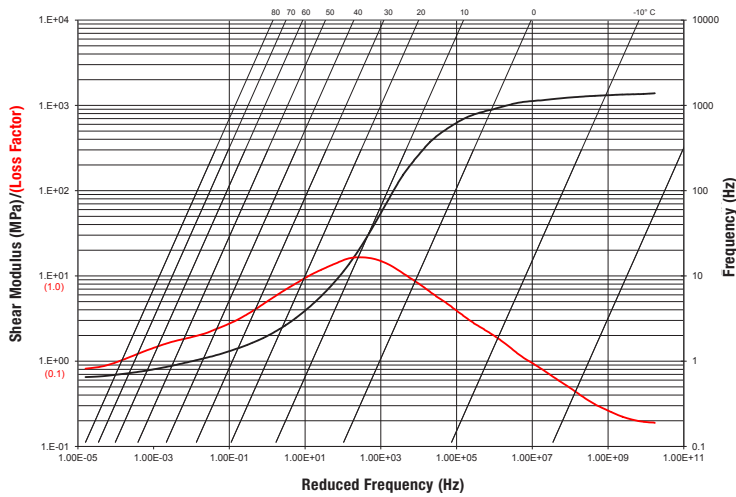
**ISOLOSS SL-20300**



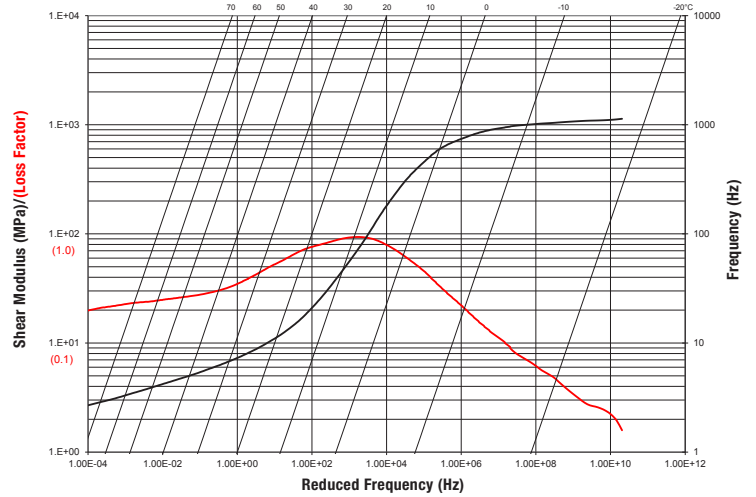
**ISOLOSS SL-35300**



**ISOLOSS SL-50300**



**ISOLOSS SL-60300**



**Typical Properties**

| <i>Property</i>                                                                                                                                              | <i>CFNT-EGS</i> | <i>CF-40EG</i> | <i>CF-42EG</i> | <i>CF-45EG</i> | <i>CF-47EG</i> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------|----------------|----------------|----------------|
| <b>Density Nominal kg/m<sup>3</sup> (lb/ft<sup>3</sup>)</b><br>ASTM D3574                                                                                    | 83 (5.18)       | 96.1 (6)       | 96.1 (6)       | 96.1 (6)       | 96.1 (6)       |
| <b>Ball Rebound %</b><br>ASTM D3574                                                                                                                          | < 1             | < 1            | < 1            | < 1            | < 1            |
| <b>Thermal Conductivity – K Value</b><br>ASTM C518 W/m*K (BTU in/hr ft <sup>2</sup> F)                                                                       | .0039 (0.27)    | .0039 (0.27)   | .0040 (0.28)   | .0040 (0.27)   | .0039 (0.27)   |
| <b>Compression Set (%)</b><br>ASTM D357<br>22hr @ 22C (72 F), Compressed 50%                                                                                 | < 1             | < 1            | < 1            | < 1            | < 1            |
| <b>Indentation Force Deflection</b><br>ASTM D3574 Test B1 Modified<br>25% Deflection for 12" x 12" x 2"<br>sample 22C (72F) @ 50% Relative<br>Humidity (lbf) | 10-17           | 15-28          | 29-41          | 42-55          | 55-70          |
| <b>Tensile Strength kPa (psi)</b><br>ASTM D3574<br>5.1mm/min (20 in/min)                                                                                     | 48 (6.7)        | 53 (7.7)       | 90 (13)        | 129 (19)       | 229 (33)       |
| <b>Tear Strength kN/m (lbf/in)</b><br>ASTM D3574<br>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)      |
| <b>Tg (Peak Loss Modulus), °C</b><br>DMA, 10 Hz & 0.3 amplitude,<br>30% compression                                                                          | -2.5            | 2.7            | 6.7            | 14             | 19             |
| <b>Peak Tan Delta @ Temp C (F)</b><br>DMA, 10 Hz & 0.3 amplitude,<br>30% compression                                                                         | 1.34 @ 22 C     | 1.33 @ 26 C    | 1.26 @ 30 C    | 1.17 @ 39 C    | 1.07 @ 46 C    |
| <b>Compression Load Deflection</b><br>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)   |

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

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

**Environmental Properties**

| <i>Property</i>              | <i>CFNT-EGS</i> | <i>CF-40EG</i>        | <i>CF-42EG</i>        | <i>CF-45EG</i>        | <i>CF-47EG</i>        |
|------------------------------|-----------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <b>Flammability</b><br>UL 94 | Meets<br>HBF    | Listed HF-1<br>@ 2 mm | Listed HF-1<br>@ 2 mm | Listed HF-1<br>@ 2 mm | Listed HF-1<br>@ 2 mm |
| <b>RoHS Compliant</b>        | Yes             | Yes                   | Yes                   | Yes                   | Yes                   |
| <b>Halogen Free*</b>         | Yes             | Yes                   | Yes                   | Yes                   | Yes                   |

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

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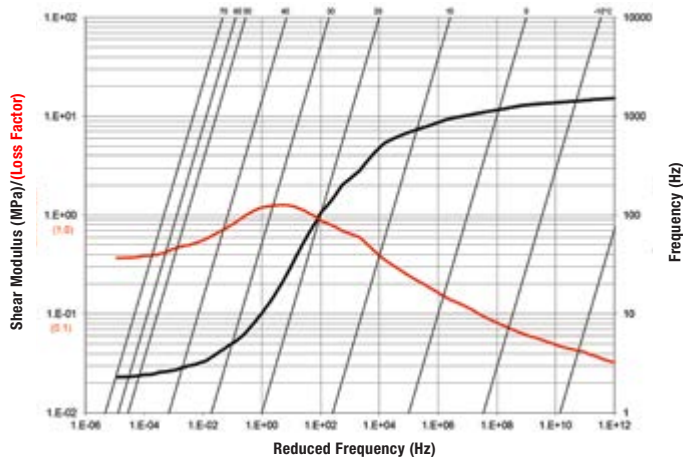
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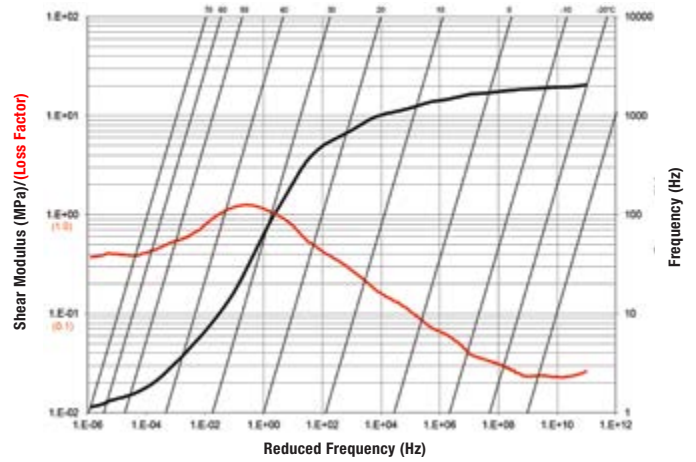
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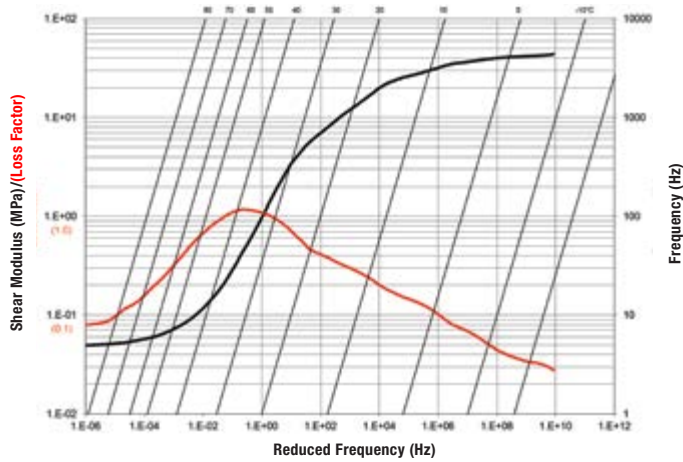
CF-40EG



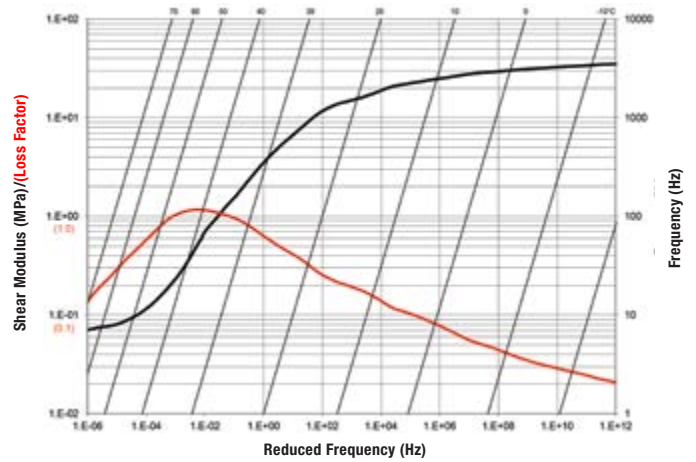
CF-42EG



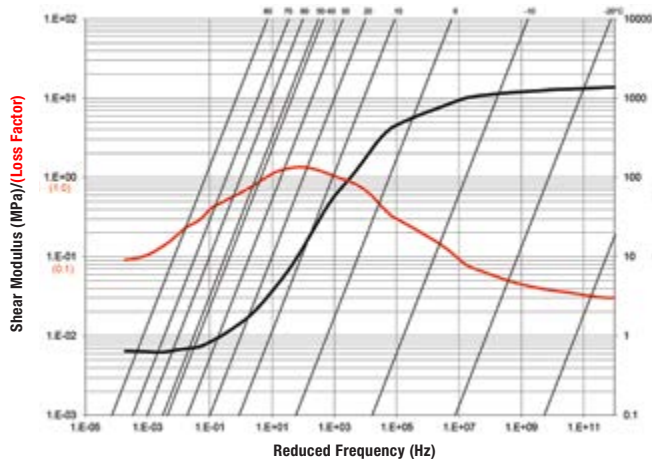
CF-45EG



CF-47EG



CFNT-EGS



## Typical Properties

| Property                                                                                                            | CF-42SC                                  | CF-47SC                                  |
|---------------------------------------------------------------------------------------------------------------------|------------------------------------------|------------------------------------------|
| <b>Density Nominal kg/m3 (lbs/ft3)</b><br>ASTM D 3574-03 Test A                                                     | 101 kg/m3<br>(6.3 lbs/ft.³)              | 101 kg/m3<br>(6.3 lbs/ft.³)              |
| <b>Tensile Strength kPa (psi)</b><br>ASTM D 3574-03 Test E                                                          | 131 (19.1)                               | 288.82 (41.89)                           |
| <b>Tear Resistance kN/m (lbf/in)</b><br>ASTM D 3574-03 Test F                                                       | 0.53 (3.0)                               | 1.26 (7.19)                              |
| <b>Elongation</b><br>ASTM D 3574-03 Test F                                                                          | 181%                                     | 142%                                     |
| <b>Compression Set (%)</b><br>ASTM D3574-03 Test D-<br>50% Compression<br>22 hr at 22C (72F)<br>22 hr at 60C (140F) | <2%                                      | <1%<br><1%                               |
| <b>Compression Load Deflection kPa (psi)</b><br>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)                            |
| <b>Dust Resistance</b><br><b>IEC 60529-Category 2</b><br>50% Compression<br>70% Compression                         | IP 5X Rating<br>Dust Proof<br>Dust Proof | IP 5X Rating<br>Dust Proof<br>Dust Proof |

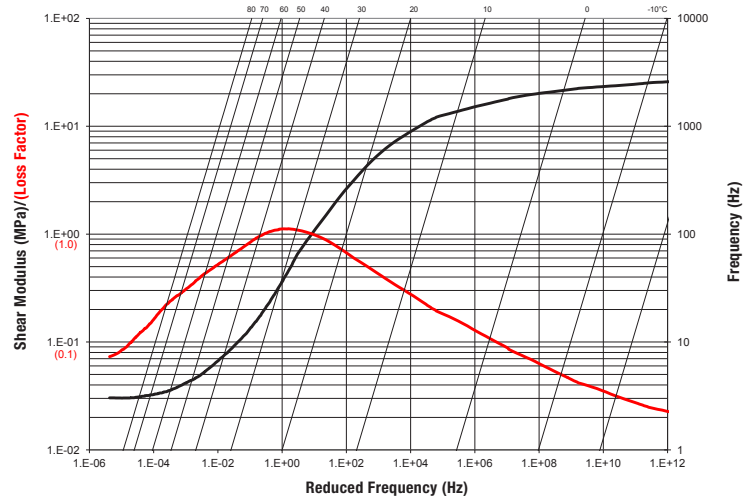
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## Environmental Properties

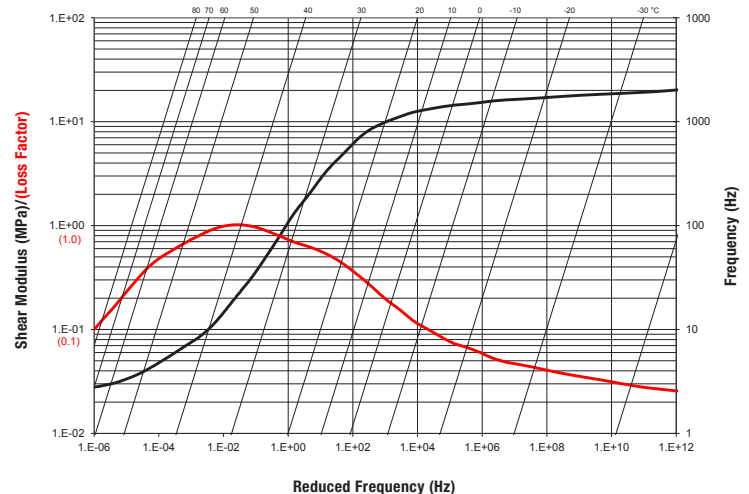
| Property                     | CF-42SC                         | CF-47SC                        |
|------------------------------|---------------------------------|--------------------------------|
| <b>Flammability</b><br>UL 94 | Listed HF-1 @<br>0.5 mm – 3.0mm | Meets HF-1 @<br>1.6 mm – 3.5mm |
|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

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

### CF-42 SC



### CF-47 SC



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