



NICKEL/GRAPHITE FILLED SILICONE ELASTOMER

ECE072 is a nickel/graphite filled silicone elastomer. ECE072 has excellent shielding properties and conductivity. This material has excellent sealing at temperature extremes, is ozone resistant, and has a long shelf life. It has been developed to meet UL94 V-0 standard.

This material can be molded, extruded, or formed into sheets and then die-cut. See our catalog for standard shapes available, or provide information about your needs for a custom profile.

FEATURES

- Utilizes both conductive and non-conductive materials
- Provides stronger environmental shielding to the outside of gaskets due to pure silicone
- Retains strong EMI protection
- Cost-effective solution
- Able to extrude in various sizes and profiles

MARKETS

- DataCom
- Military
- Medical
- Industrial Electronics

| PARAMETER | TEST METHOD | TYPICAL VALUE |
|---|-------------------------|------------------------------|
| Color | Visual Inspection | Gray |
| Elastomer type | Formulation | Silicone Resin |
| Filler type | Formulation | Nickel coated on Graphite |
| Density | ASTM D792 | 2.2 ± 0.25 g/cm ³ |
| Electrical | | |
| Shielding Effectiveness (20-MHz through 10-GHz) | MIL-DTL-83528C (4.5.12) | 100 dB, minimum |
| Volume Resistivity 0.1 ohm-cm, maximum | MIL-DTL-83528C (4.5.10) | 0.08 ohm-cm, maximum |
| Mechanical Properties | | |
| Hardness - Shore A | ASTM D2240 | Shore A, 68 ± 7 |
| Tensile Strength | ASTM D412 | 280 psi, minimum |
| Elongation | ASTM D412 | 150%, minimum |
| Tear Strength | ASTM D624, die C | 55 ppi, minimum |
| Compression Set | ASTM D395 | 30%, maximum |
| Temperature Range (min) | ASTM D1329 | -45°C |
| Temperature Range (max) | MIL-DTL-83528C (4.5.15) | 150°C |
| UL Flammability Rating | File E203070 | UL94 V0 Certified |

SHEET MATERIAL

The Table below lists thicknesses and sizes for our molded sheet material.

| THICKNESS/TOLERANCE | 18 X 18 SHEET |
|---------------------------|------------------|
| 0.045 ± 0.005 (1,1 ± 0,1) | 8860-0045-324-XX |
| 0.062 ± 0.007 (1,5 ± 0,2) | 8860-0062-324-XX |

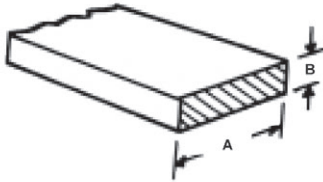
TOLERANCES ALL PROFILES

| DIMENSIONS | TOLERANCE |
|------------------------------|----------------|
| Under 0.101 (2,6) | ± 0.005 (0,15) |
| 0.101 to 0.200 (2,6 to 5,1) | ± 0.008 (0,2) |
| 0.201 to 0.300 (5,1 to 7,6) | ± 0.010 (0,3) |
| 0.301 to 0.500 (7,6 to 12,7) | ± 0.015 (0,4) |
| Over 0.500 (12,7) | ± 0.020 (0,5) |

USA: +1.866.928.8181
 Europe: +49.0.8031.2460.0
 Asia: +86.755.2714.1166

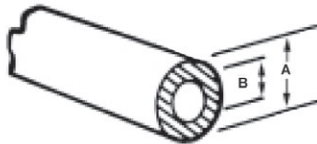


Rectangular Strips



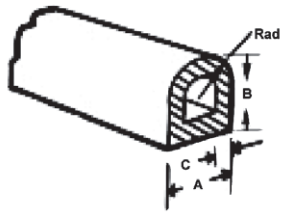
| MIL-DTL-85328 PART NUMBER | PART NUMBER | NOMINAL DIMENSIONS | |
|------------------------------|----------------|--------------------|-------------|
| | | A | B |
| M83528/002X006 | 8861-0175 | 0.252 (6,4) | 0.031 (0,8) |
| M83528/009X008 | 8861-0135 | 0.500 (12,7) | 0.125 (3,2) |
| M83528/009X011 | 8861-0192 | 1.00 (25,4) | 0.126 (3,2) |

O-Strip Tubing



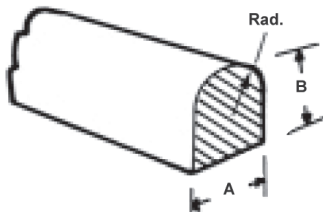
| MIL-DTL-85328 PART NUMBER | PART NUMBER | NOMINAL DIMENSIONS | |
|------------------------------|----------------|--------------------|-------------|
| | | A | B |
| | 8864-0060 | 0.085 (2,2) | 0.040 (1,0) |
| M83528/011X007 | 8864-0095 | 0.103 (2,6) | 0.040 (1,0) |
| M83528/011X001 | 8864-0100 | 0.125 (3,2) | 0.045 (1,1) |
| M83528/011X002 | 8864-0105 | 0.156 (4,0) | 0.050 (1,3) |
| M83528/011X008 | 8864-0143 | 0.177 (4,5) | 0.079 (2,0) |
| M83528/011X003 | 8864-0110 | 0.250 (6,4) | 0.125 (3,2) |
| M83528/011X004 | 8864-0120 | 0.312 (7,9) | 0.192 (4,9) |
| M83528/011X005 | 8864-0125 | 0.375 (9,5) | 0.250 (6,4) |

Hollow D-Strips



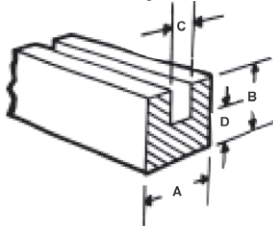
| MIL-DTL-83528 PART NUMBER | PART NUMBER | DIMENSIONS | | | |
|------------------------------|-------------|--------------|--------------|-------------|-------------|
| | | A | B | RAD | C |
| | 8866-0130 | 0.100 (2,5) | 0.094 (2,4) | 0.050 (1,3) | 0.025 (0,6) |
| M83528/007X001 | 8866-0100 | 0.156 (4,0) | 0.156 (4,0) | 0.078 (2,0) | 0.045 (1,1) |
| M83528/007X007 | 8866-0110 | 0.250 (6,4) | 0.250 (6,4) | 0.125 (3,2) | 0.065 (1,7) |
| M83528/007X004 | 8866-0166 | 0.374 (9,5) | 0.252 (6,4) | 0.187 (4,8) | 0.039 (1,0) |
| | 8866-0126 | 0.480 (12,2) | 0.335 (8,5) | 0.240 (6,1) | 0.035 (0,9) |
| M83528/007X006 | 8866-0155 | 0.625 (15,9) | 0.400 (10,2) | 0.312 (7,9) | 0.057 (1,4) |

D-Strips



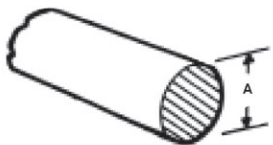
| MIL-DTL-83528 PART NUMBER | PART NUMBER | DIMENSIONS | | | RECOMMENDED GROOVE DIMENSIONS (±0.002) | |
|------------------------------|-------------|-------------|-------------|-------------|---|-------------|
| | | A | B | RAD | WIDTH | DEPTH |
| MB83528/003X001 | 8865-0105 | 0.062 (1,6) | 0.068 (1,7) | 0.031 (0,8) | 0.074 (1,9) | 0.057 (1,4) |
| MB83528/003X007 | 8865-0130 | 0.122 (3,1) | 0.135 (3,4) | 0.061 (1,5) | 0.141 (3,6) | 0.113 (2,9) |
| MB83528/003X012 | 8865-0145 | 0.250 (6,4) | 0.250 (6,4) | 0.125 (3,2) | 0.286 (7,3) | 0.212 (5,4) |

Channel Strips



| MIL-DTL-83528 PART NUMBER | PART NUMBER | DIMENSIONS | | | |
|------------------------------|-------------|-------------|-------------|-------------|-------------|
| | | A | B | C | D |
| M83528/010X002 | 8868-0105 | 0.126 (3,2) | 0.110 (2,8) | 0.025 (0,6) | 0.050 (1,3) |
| M83528/010X004 | 8868-0115 | 0.156 (4,0) | 0.156 (4,0) | 0.062 (1,6) | 0.047 (1,2) |
| M83528/010X005 | 8868-0081 | 0.189 (4,8) | 0.189 (4,8) | 0.063 (1,6) | 0.063 (1,6) |
| | 8868-0085 | 0.252 (6,4) | 0.252 (6,4) | 0.126 (3,2) | 0.063 (1,6) |

O-Strips



| MIL-DTL-85328 PART NUMBER | PART NUMBER | RECOMMENDED GROOVE DIMENSIONS (±0.002) | | |
|------------------------------|-------------|--|--------------|-------------|
| | | A | WIDTH | HEIGHT |
| | 8863-0184 | 0.032 (0,8) | 0.036 (0,9) | 0.026 (0,7) |
| M83528/001X003 | 8863-0110 | 0.062 (1,6) | 0.066 (1,7) | 0.050 (1,3) |
| M83528/001X009 | 8863-0145 | 0.125 (3,2) | 0.133 (3,4) | 0.100 (2,5) |
| M83528/001X013 | 8863-0202 | 0.374 (9,5) | 0.400 (10,2) | 0.300 (7,6) |

EMI-DS-ECE072 1212

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