

Electrically Conductive Elastomer

CE-018-55



CE-018-55 is Shore A 55 durometer hardness Fluorosilicone elastomer filled with nickel graphite particles as the conductive and shielding media. **CE-018-55** has good shielding properties and conductivity along with excellent sealing at temperature extremes. It is ozone resistant and has a long shelf life. **CE-018-55** combines the excellent low temperature performance of silicone with improved chemical resistance. This material can be supplied as molded parts, extruded shapes, and die cut parts or as standard sheet stock. Contact our main office for additional information regarding your specific application.

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|------------------|-----------------|
| Elastomer: | Fluorosilicone |
| Filler Material: | Nickel Graphite |
| Color: | Dark Grey |

Electrical Properties

Test Method

| | | | | |
|--|------|----|-------------------------------|----------------|
| Volume Resistivity (ohm-cm) (as supplied) | Max. | .2 | MIL-DTL-83528F | (Para. 4.5.11) |
| Shielding Effectiveness (db) | Min. | | MIL-DTL-83528F MIL-STD-285 | (Para. 4.5.12) |
| 100 MHz (E-Field) | | 70 | | |
| 500 MHz (E-Field) | | 70 | | |
| 2 GHz (Plane Wave) | | 70 | | |
| 10 GHz (Plane Wave) | | 70 | | |

Electrical Stability

| | | | | |
|--|------|-----|----------------|----------------|
| After Heat Aging (ohm-cm) | Max. | .3 | MIL-DTL-83528F | (Para. 4.5.15) |
| After Break (ohm-cm) | Max. | .4 | MIL-DTL-83528F | (Para. 4.5.9) |
| During Vibration (ohm-cm) | Max. | N/A | MIL-DTL-83528F | (Para. 4.5.13) |
| After Vibration (ohm-cm) | | N/A | | |
| After Exposure to EMP (ohm-cm) (0.9 KAmper/inch of Perimeter) | Max. | N/A | MIL-DTL-83528F | (Para. 4.5.16) |

Physical Properties

| | | | | |
|----------------------------|------|-----|----------------|--------------------|
| Specific Gravity (+/-0.25) | | 1.6 | ASTM D792 | (MIL Para. 4.5.3) |
| Hardness (Shore A) (+/-7) | | 55 | ASTM D2240 | (MIL Para. 4.5.4) |
| Tensile Strength (PSI) | Min. | 125 | ASTM D412 | (MIL Para. 4.5.6) |
| Elongation (%) | Min. | 100 | ASTM D412 | (MIL Para. 4.5.6) |
| | Max. | 400 | | |
| Tear Strength (PPI) | Min. | 25 | ASTM D624 | (MIL Para. 4.5.8) |
| Compression Set (%) | Max. | 40 | ASTM D395 | (MIL Para. 4.5.7) |
| Upper Operating Temp. (°C) | Max. | 160 | | |
| Lower Operating Temp (°C) | Min. | -55 | ASTM D1329 | (MIL Para. 4.5.14) |
| Compression Deflection (%) | Min. | 5 | ASTM D575 | (MIL Para. 4.5.5) |
| Fluid Immersion | | SUR | MIL-DTL-83528F | (Para. 4.5.17) |

SUR=Survivable NS=Not Survivable

Note: For compression data please contact sales@nedc.com or refer to www.nedc.com.

Performance of conductive elastomers varies on application. NEDC Sealing Solutions cannot guarantee that the above specifications will be met in your application. If you need assistance in testing your application, do not hesitate to contact us for further information.

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