

**CEM-NC001 ELECTRICALLY CONDUCTIVE
NICKEL COATED GRAPHITE FILLED SILICONE ELASTOMER****Product overview**

CEM-NC001 is an electrically conductive composite material comprising of silicone elastomer and nickel coated graphite particles. It is formulated for the production of sheet, flat gaskets and custom mouldings that offer a combined high level of EMI shielding and environmental sealing over a wide temperature range. The silicone elastomer base provides excellent resistance to extremes of temperature and long term ageing.

CEM-NC001 meets the requirements of ASTM E-595-07 for low outgassing applications.

CEM-NC001 also exhibits good galvanic (electro-chemical) stability when used in combination with aluminium alloys, particularly in humid or damp environments.

Shielding Effectiveness	
200kHz (H field)	75dB
100MHz (E field)	>100dB
500MHz (E field)	>100dB
2GHz (Plane wave)	>100dB
10GHz (Plane wave)	>100dB

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Cured Properties	
Colour	Dark grey
Density	2.0 gcm ⁻³
Hardness Range	30-80 Shore A Standard 60 Shore A
Volume resistivity	<0.1Ω.cm
Tensile strength	1.0MPa
Tear strength	7kN/m
Elongation	80%
Compression set – 72 hours at 100°C	30%
Service temperature range	-45°C to 150°C
Maximum intermittent temperature	200°C

ASTM E-595-07 Outgassing Properties (No PSA)	
Total Mass Loss (%TML)	0.035
Collected Volatile Condensable Materials (%CVCM)	0.006
Water Vapour Regain (%WVR)	0.016

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This material is available as die cut flat gaskets, sheet, strips and custom moulded components. The equivalent material type is also available in the form of extruded sections (CEE-NC001).

Conductive elastomer sheets and most flat/die-cut gaskets can be supplied with a silicone pressure sensitive adhesive (PSA) backing. This adhesive backing is intended primarily as an assembly adhesive and allows the gasket to be precisely located and held in place to allow accurate assembly.

The adhesive can have slightly increase surface contact resistance which can translate into a reduction of shielding effectiveness of very approximately 5dB but normally has no significant impact in most applications.

Before assembly surfaces should be clean and free from dust or other contamination. Carefully remove the backing, avoiding contact adhesive surface. The gasket should be aligned and pressed firmly into place. If misaligned the gasket can be carefully removed and reapplied.

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