



TECHNICAL DATA SHEET

SHIELDING SOLUTIONS CEP NC001 CONDUCTIVE PASTE COMPOUND

Product overview

CEP NC001 is an electrically conductive composite material comprising of silicone elastomer and nickel-plated graphite particles. It is designed for Form-in-Place (CNC application) onto a wide range of components where it cures to form an elastomeric gasket section that has good adhesion to most commonly used substrates. This allows intricate, small section gaskets to be reliably and efficiently applied to any quantity of parts without the requirement for expensive tooling.

When designed in correctly it provides a reusable EMI and environmental seal. Furthermore, if applied in combination with a non-conductive silicone form-in-place seal it is possible to achieve environmental sealing up to IP68 (water immersion).

CEP NC001 has excellent high temperature resistance and long-term ageing characteristics. The nickel-graphite filler used in this material is very effective at making a low impedance connection at low contact pressures. This makes CEP NC001 particularly suited for use on surfaces with relatively high surface contact resistance such as untreated die-cast parts.

Uncured Properties

Colour	Dark grey
Form	Thixotropic paste
Cure time – 0.6mm high bead at 23 °C/50% RH	10 hours
Recommended minimum time to use after application	24 hours



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Cured Properties

Density	2.5gcm ⁻³
Hardness	50 Shore A
Volume resistivity	<0.1Ω.cm
Adhesion	>50 Ncm ⁻²
Attenuation – 100MHz to 10GHz (MIL-STD 285)	85 – 110dB (typically)
Compression recommended (allowable range)	25% (10 – 50%)
Gasket resistance	<0.5Ω.cm ⁻¹
Elongation	100%
Compression set – 70 hours at 23°C	<20%
Service temperature range	-55°C to 150°C
Force/deflection – 0.7mm high gasket section	2.8Ncm ⁻¹ @ 10%
	7.4Ncm ⁻¹ @ 25%
	26.4Ncm ⁻¹ @ 50%

Packaging

CEP NC001 is supplied in industry standard syringe type barrels from which the material may be directly dispensed. The two main sizes are 30ml and 55ml both of which incorporate luer lock fastenings at the nozzle that allow a wide range of dispense tips to be easily attached or detached.



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Storage

It is recommended that when not in use that the material is stored in a cool dark, dry place. If the facility exists then some form of refrigerated or freezer storage is ideal. If kept properly sealed and in a suitable location then the material will remain usable for up to 6 weeks.

Handling

When using this material observe usual standards of industrial hygiene/practice. Avoid skin/eye contact and work in a well ventilated area. For more detailed information please refer to the MSDS (Material Safety Data Sheet)



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