Conductive – High Consistency Silicone Rubber (HCR)

Type – Nickel coated Graphite filled. (Ni/Graph)

Characteristics

Vulcanised articles manufactured from this nickel coated graphite filled, conductive silicone rubber compound, typically used in military / aerospace and commercial applications, exhibit a unique combination of characteristics and properties. They are noted for their good flexibility, mechanical properties, good shielding / conductive properties & good processing characteristics. Suitable for moulding applications only.

Product Data

Material Reference: PR 630 Series – Moulding

Special Features:

- Designed to meet; MIL-G-83528
- Suitable for the manufacture of parts for EMI/RFI electrical shielding applications
- Good performance in moderately corrosive environments
- Good electrical conductivity
- Service temperature range: –60ºC to +160ºC (excursions up to 200ºC)

Colour: Grey (Natural)

Safety Information

Detailed safety specific information can be obtained form the Material Safety Data Sheets (MSDS), which are available upon request.

Physical Properties

Test	Standard	Units	Typical Values			
Hardness	ASTM D2240	Shore A	50 +/- 5	60 +/- 5	70 +/- 5	80 +/- 5
Density	ASTM D792	g/cm³	2.15	2.20	2.25	2.30
Tensile Strength	ASTM D412	MPa	1.5	2.20	2.40	2.40
Elongation @ Break	ASTM D412	%	400	240	190	170
Tear Strength	ASTM D624 C	kN/m	9	12	12	13
Compression Set: 70 Hrs @ 100ºC	ASTM D395 (Method B)	%	25	25	28	30

Electrical Properties

Volume Resistivity	ASTM D991 – 89	Ohm/cm	< 0.2	< 0.1	< 0.1	< 0.1
Shielding Effectiveness:	MIL-G-83528					
200 KHz (H Field)		dB	-	-	-	-
100 MHz (E Field)		dB	95	100	100	100
500 MHz (E Field)		dB	95	100	100	100
2 GHz (Plane Wave)		dB	85	95	100	100
10 GHz (Plane Wave)		dB	85	95	100	100

Typical Cure Conditions

Press-cure	10 minutes @ 170°C
Post-cure	2 hours @ 150°C
Catalyst type	Dicumyl Peroxide or DHBP

This data is obtained from test pieces moulded in the laboratory and are intended as a guide. They should not be used in preparing specifications.