



Conductive – High Consistency Silicone Rubber (HCR)

Type – Carbon filled. (C)

Characteristics

Vulcanised articles manufactured from this carbon black filled, conductive silicone rubber compound exhibit a unique combination of characteristics and properties. They are noted for their good flexibility, mechanical properties, conductive properties & very good processing characteristics. Suitable for both moulding and extrusion applications.

Product Data

Material Reference: PR 610 Series – Moulding & Extrusion

- Special Features:**
- Designed to meet; MIL-G-83528
 - Suitable for the manufacture of parts requiring electrical conductivity
 - Low end shielding or ESD protection
 - Excellent electrical conductivity for a carbon grade
 - Can be formulated with ingredients listed under FDA 21 CFR§177.2600 'Rubber articles intended for repeated use'¹
 - Service temperature range: –55°C to +200°C

Colour: Black (Natural)

Safety Information

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

Physical Properties

Test	Standard	Units	Typical Values			
			50 +/- 5	60 +/- 5	70 +/- 5	80 +/- 5
Hardness	ASTM D2240	Shore A	50 +/- 5	60 +/- 5	70 +/- 5	80 +/- 5
Density	ASTM D792	g/cm ³	1.15	1.17	1.18	1.20
Tensile Strength	ASTM D412	MPa	6.00	6.30	6.00	5.00
Elongation @ Break	ASTM D412	%	250	220	195	175
Tear Strength	ASTM D624 C	kN/m	15	12	14	13
Compression Set: 70 Hrs @ 100°C	ASTM D395 (Method B)	%	15	14	15	20

Electrical Properties

Volume Resistivity	ASTM D991 – 89	Ohm/cm	< 5	< 2	< 2	< 2
Shielding Effectiveness:	MIL-G-83528					
200 KHz (H Field)		dB	-	-	-	-
100 MHz (E Field)		dB	80	90	90	90
500 MHz (E Field)		dB	80	90	90	90
2 GHz (Plane Wave)		dB	60	70	70	70
10 GHz (Plane Wave)		dB	50	60	60	60

Typical Cure Conditions

Press-cure	10 minutes @ 160°C
Post-cure	4 hours @ 200°C
Catalyst type	Dicumyl Peroxide or DHBP or Platinum

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.

¹Note¹ Not suitable for use in contact with milk or edible oils

Disclaimer: The information & data contained herein is believed to be accurate & reliable. However, it is the user's responsibility to determine suitability for the application of intended use. Primasil Silicones Ltd make no warranties concerning fitness or suitability of its products for a particular use or purpose. Alterations may be made to the above information on the basis of further knowledge being obtained.