

#### **ADVANCED CARBONS**

# ATHLOS<sup>™</sup> SR1200 CARBON NANOSTRUCTURES



#### **Product Highlights**

Our ATHLOS carbon nanostructures (CNS) are a family of highly conductive, coated, branched and crosslinked carbon nanotube structures.

ATHLOS CNS products have a unique morphology consisting of interlinked nanostructures which differentiate this product line from traditional carbon nanomaterials by delivering a combination of:

- Enhanced conductivity at lower loadings
- High EMI Shielding Effectiveness (SE)
- Increased tensile strength
- Enhanced handling for easier processing



### **Applications in Silicone Elastomers**

ATHLOS SR1200 CNS are suitable for use in conductive silicone applications requiring an optimal balance of high electrical conductivity, electromagnetic interference (EMI) shielding, enhanced mechanical integrity and good processability.

ATHLOS SR1200 CNS is compatible with silicone chemistries listed below, cured by addition, peroxide or condensation mechanism:

- High Temperature Vulcanized Rubber (HTV)
- Liquid Silicone Rubber (LSR)
- Room Temperature Vulcanized Rubber (RTV)

TYPICAL PROPERTIES				
Property	Value	Test Method		
Pellet Size	~5 mm (L) x 1 mm (D)	CTM*		
Bulk Density	0.135 g/cm3	ASTM D7481		
Surface Area	200 m²/g	ASTM D6556		
% Carbon	>97%	CTM*		
Post Coating	<1% in proprietary mixtures	CTM*		

\*Tests are performed using Cabot Test Methods, and the percentiles are based on weight.

The data in the table and charts in this document are typical test values intended as guidance only, and they are not product specifications. Product specifications are available upon request from your Cabot representative.

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### **Conductive and EMI Shielding Performance**

The following figures illustrate the electrical percolation curves and EMI shielding performance for ATHLOS SR1200 CNS-filled silicone elastomers measured during tests performed according to the test methods listed on the Typical Properties table in this document.

- Volume Resistivity in HTV:
  < 2.0 Ω.cm @ 5% loading (ASTM D257)</li>
- SE @ 1.0 GHz in HTV:
  38 dB @ 5% loading, 2 mm thick (ASTM D4935)
- SE @ 15 GHz in HTV:
  85 dB @ 5% loading, 2 mm thick (IEEE 299)

## **Product form and logistics**

- Product form: Pellets
- Regional availability: Global
- Packaging options: 5 kg boxes



For information on product-specific storage conditions, please refer to the applicable Safety Data Sheet (SDS) available from your Cabot representative or at cabotcorp.com.

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Billerica, MA 01821-7001	Rua do Paraíso 148 - 5° andar	Riga LV-1039	LOB 15, Office 424, Dubai	Minghang District	2-5-5 Shiba Daimon,
United States	04103-000 São Paulo	LATVIA	United Arab Emirates	Shanghai 201108	Minato-ku, Tokyo 105-0012
T +1 800 462 2313	Brazil	T +371 6705 0700	T +971 4 8871 800	China	Japan
<b>F</b> +1 978 670 7035	<b>T</b> +55 11 2144 6400	F +371 6780 6478	F +971 4 8871 801	T +86 21 5175 8800	T +81 6820 0255
	F +55 11 3253 0051			F +86 21 6434 5532	F +81 3 5425 4500

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