ADVANCED CARBONS

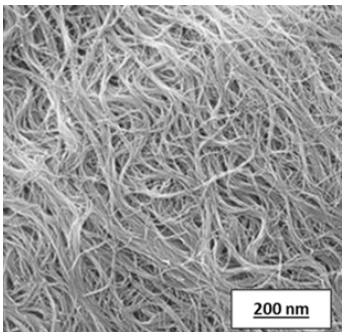
ATHLOS™ SR1200 CARBON NANOSTRUCTURES

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 m^2/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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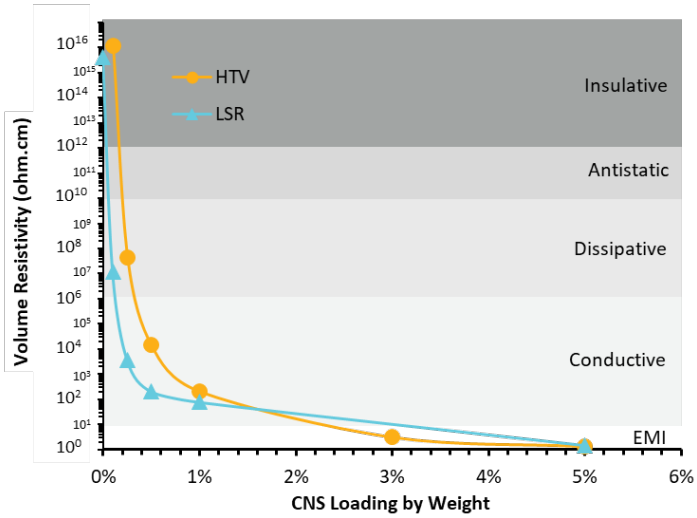
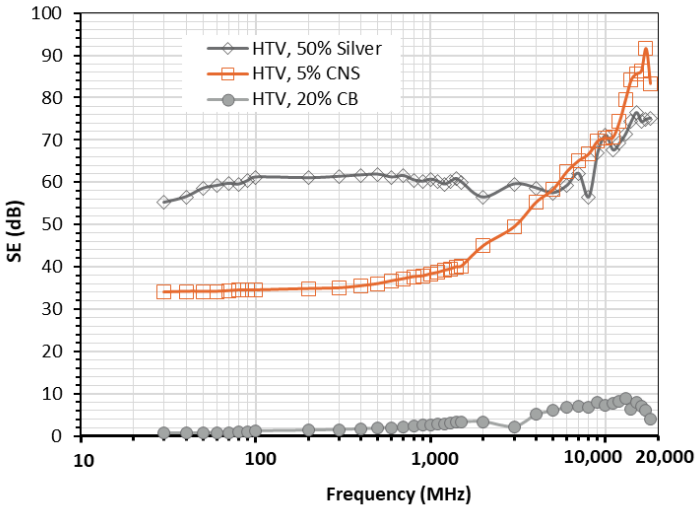
Conductive and EMI Shielding Performance

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)
- 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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