

ATHLOS™ SR1200 CARBON NANOSTRUCTURES IN FLUROELASTOMER (FKM) AUTOMOTIVE FUEL HOSES



APPLICATION	Inner liner for FKM automotive fuel hose
CHALLENGE	Formulations developed with conductive carbon blacks (CB) to meet OEM conductivity specifications show high viscosity and difficult processability; the required conductivity levels cannot be reached using typical CB for FKM compounds such as MT-N990 CB
ADVANTAGES	<p>Enables an increase in compound conductivity with minimum impact on viscosity</p> <p>Enables broader formulation flexibility in rubber conductive compounds</p>

PRODUCT INFORMATION

Carbon nanostructures (CNS) are a unique network of crosslinked carbon nanotubes produced using a proprietary roll-to-roll chemical vapor deposition (CVD) process. CNS enable a superior balance of conductivity, mechanical strength and processability.

PERFORMANCE FEATURES

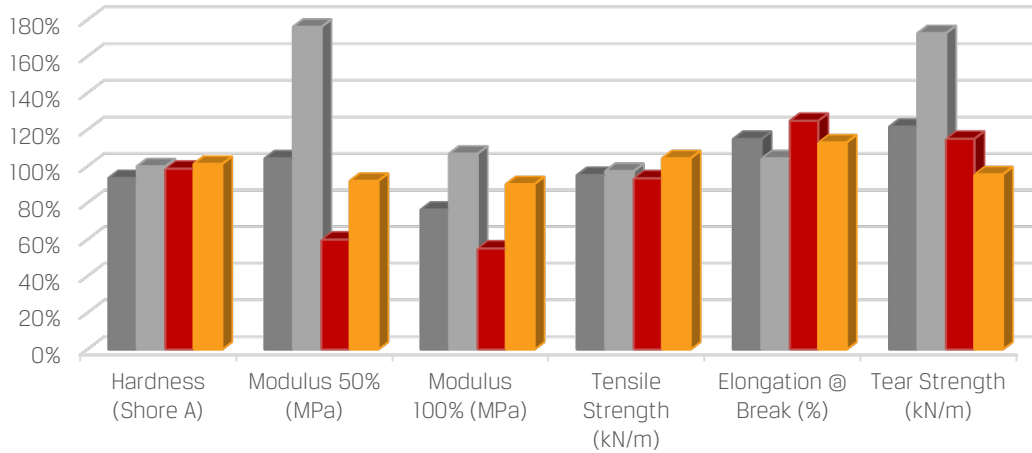
- ◆ conductivity
- ◆ mechanical strength
- ◆ processability
- ◆ flexibility

PERFORMANCE OF ATHLOS™ SR1200 CNS IN FKM MODEL FORMULATION (LOW VISCOSITY, 70% FLUORINE) *

Compound#	1	2	3	4	5
MT - N990 CB	30	15	15		
CONDUCTIVE CB				10	15
ATHLOS™ SR1200 CNS		0.5	1		
Mooney Viscosity (1+10) @121°C	23.7	20	22.2	23.1	30.7
Resistivity (ohm-cm) - ASTM D990	Too high	274	4	7444	170

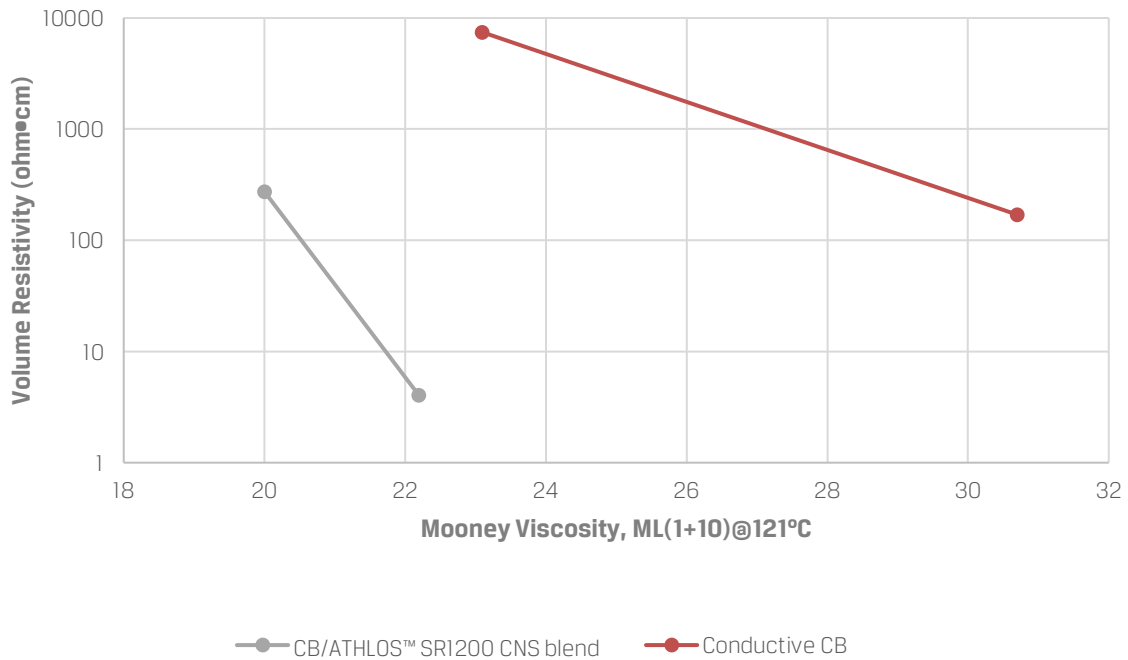
*Peroxide Cured

INDEXED VALUES VS REF (MT - N990 CB = 30 PHR)



■ MT-N990/ATHLOS™ SRI200 CNS 15/0.5 ■ MT-N990/ATHLOS™ SRI200 CNS 15/1 ■ Conductive CB 10PHR ■ Conductive CB 15PHR

VOLUME RESISTIVITY VS. MOONEY VISCOSITY



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