

# SID RICHARDSON CARBON & ENERGY CO.

Fort Worth Research Center

4825 N. Freeway

Fort Worth, TX 76106

## Test Prices

*Prices Effective January 1, 2011*

### Analytical Testing for Physicochemical Properties

<u>ASTM Ref.</u>	<u>Test Method Description</u>	<u>Price</u>
D 1618	% Toluene Extractable	\$200
D 4004	Analysis by AA, Atomic Absorption	\$280
D 1506-A	Ash by Muffle Furnace	\$145
D 6086	CVI, Compressed Volume Index	\$220
D 4571	Determination of Volatile Content	\$200
D 1508	Fines Content of Pelleted Carbon Black	\$150
D 1509-B	Heating Loss by Moisture Balance	\$125
D 1509-A	Heating Loss by Oven Method	\$200
D 1510	Iodine Adsorption Number of Carbon Black	\$275
	Iron Content of Carbon Black (Wet Method)	\$250
D 1937	Mass Strength of Pelleted Carbon Black	\$250
D 6556	N2SA / STSA	\$325
D 3493	Oil Absorption Number of 24M4 Compressed Carbon Black	\$200
D 2414	Oil Absorption Number of Carbon Black	\$195
D 5230	Pellet Hardness – Titan Method (Automatic)	\$225
D 1511	Pellet Size Distribution of Carbon Black	\$225
D 1512	pH Value of Carbon Black	\$250
D 1513	Pour Density of Pelleted Carbon Black	\$180
D 1514	Sieve Residue of Carbon Black	\$275
D 1619	Sulfur Content of Carbon Black By XRF	\$200
D 3265	Tint Strength of Carbon Black	\$250

### Microscopy Services

<u>ASTM Ref.</u>	<u>Test Method Description</u>	<u>Price</u>
	Elemental Analysis by EDX	\$350/Hr
	Optical Microscopy	\$150/Hr
	SEM, Scanning Electron Microscopy	\$375/Hr
	TEM, Transmission Electron Microscopy	\$375/Hr

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### Rubber Property Testing

<u>ASTM Ref.</u>	<u>Test Method Description</u>	<u>Price</u>
	Angle Abrasion Index, AAI	\$250
D 3182	Banbury/Mill Mixing	\$200/Hr
	Compounding	\$100/Hr
D 395	Compression Set, Method B	\$200
	Curing	\$150/Hr
D 2230	Die Swell	\$150
D 2240	Durometer Hardness, Type A	\$100
D 5992	Dynamic Viscoelasticity Testing (G', G'', Tan d)	\$350
D 1646	Mooney Viscosity & Scorch	\$125
D 5289	Moving Die Rheometry, MDR	\$125
D 1054	Rebound Resistance, Goodyear-Healy	\$150
D 624	Tear Energy – Molded Groove Geometry	\$350
	Tear Energy – Peel Adhesion Test	\$350
	Tear Energy – Pure Shear Geometry	\$375
D 412	Tensile Properties of Elastomers	\$200

### Other Testing

<u>ASTM Ref.</u>	<u>Test Method Description</u>	<u>Price</u>
	Acoustic Attenuation Coefficient – 1 MHz (25°C)	\$350
	Carbon Black Typing (TGA, Pyrolysis, N2SA, CVI, TEM)	\$2,500
	Digital Photography (Included With Microscopy)	\$50
D 1519	DSC, Differential Scanning Calorimetry	\$275
D 6370	TGA, Thermogravimetric Analysis	\$325
D 991	Volume Resistivity, DC – Cured Rubber	\$375
D 991	Volume Resistivity, DC – Powder Samples	\$400
D 991	Volume Resistivity, DC – Uncured Rubber	\$425