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NQA NATIONAL QUALITY ASSURANCE, USA 9001:2000 REGISTERED COMPANY

Comparative Resistance of Rubber Materials to Chemical/Environmental Exposures

For General Reference Only - Application Requirements Should Be Discussed Prior to Final Specification.

SE75 Rev. 6/2005

Properties		Natural Rubber	SBR	Butyl	EPDM	NBR	Silicone	Neoprene	Fluoroelastomer (Viton)	Fluorosilicone
Tensile Strength (PSI)	Pure Gum	Over 3000	Below 1000	Over 1500	Over 1500	Below 1000	Below 1500	Over 1500	Below 1000	Below 1500
	Black Loaded	Over 3000	Over 2000	Over 2000	Over 2000	Over 2000	Below 1500	Over 2000	Over 2000	Below 1500
Hardness Range	(Shore A)	30 - 90	40 - 90	40 - 75	40 - 90	40 - 90	20 - 85	30 - 95	60 - 95	40 - 80
Specific Gravity	(Base Material)	0.93	0.94	0.92	0.85	0.98	1.10	1.23	1.80	1.40
Adhesion to Metal		Excellent	Excellent	Good	Good	Excellent	Good	Excellent	Excellent	Good
Tear Resistance		Good	Fair	Good	Good	Fair	FaIr	Good	Fair	Fair
Abrasion Resistance		Excellent	Good	Good	Good	Good	Poor	Excellent	Good	Poor
Compression Set		Good	Good	Fair	Good	Good	Good	Fair	Good	Good
ReBound	Cold	Excellent	Good	Poor	Good	Good	Excellent	Good	Very Low	Excellent
	Hot	Excellent	Good	Good	Good	Good	Excellent	Good	Low	Excellent
Dielectric Strength		Excellent	Excellent	Excellent	Excellent	Poor	Good	Good	Good	Good
Electrical Insulation		Good	Good	Good	Excellent	Poor	Excellent	Fair	Fair	Excellent
Permeability to Gases		Fair	Fair	Very Low	Poor	Fair	Good	Low	Low	Excellent
Acid Resistance		Fair	Fair	Excellent	Good	Good	Good	Good	Good	Good
Solvent Resistance	Aliphatics	Poor	Poor	Poor	Poor	Excellent	Poor	Good	Excellent	Excellent
	Aromatics	Poor	Poor	Poor	Poor	Good	Poor	Fair	Excellent	Good
	Keytones	Good	Good	Good	Good	Poor	Fair	Poor	Fair	Fair
	Alcohols	Good	Good	Good	Good	Fair	Good	Good	Good	Good
RESISTANCE TO	Swell in Lubricating Oil	Poor	Poor	Poor	Poor	Very Good	Fair	Good	Excellent	Good
	Oil & Gasoline	Poor	Poor	Poor	Poor	Excellent	Fair	Good	Excellent	Good
	Animal & Vegetable Oils	Poor	Poor	Good	Good	Excellent	Fair	Good	Good	Good
	Water Absorption	Very Good	Good	Very Good	Very Good	Good	Good	Good	Good	Excellent
	Oxidation	Good	Good	Excellent	Excellent	Good	Excellent	Excellent	Excellent	Excellent
	Ozone	Fair	Fair	Excelllent	Excellent	Fair	Excellent	Excellent	Excellent	Excellent
	Sunlight Aging	Poor	Poor	Very Good	Excellent	Poor	Excellent	Very Good	Excellent	Excellent
	Heat Aging	Good	Very Good	Excellent	Excellent	Excellent	Outstanding	Excellent	Excellent	Excellent
	Flame	Poor	Poor	Poor	Poor	Poor	Fair	Good	Good	Fair
	Heat	Good	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Good	Excellent
	Cold	Excellent	Excellent	Good	Excellent	Good	Excellent	Good	Good	Excellent