

### RUBBER COMPOUND CHARACTERISTICS

	NATURAL RUBBER	SBR	EPDM	NEOPRENE CR	HYPALON* CSM	NITRILE NBR	ACRYLIC ACM	VAMAC*	SANTO-PRENE†	SILICONE Si	THERBAN• HNBR	VITON* FPM	FLUORO-SILICONE Fsi
<b>COST FACTOR</b>	1	1	1	2	3	2	4	4	4	6	8	15	40
<b>HARDNESS RANGE</b>	30-95°	40-95°	30-85°	30-90°	40-85°	40-100°	50-85°	45-90°	50-100°	40-80°	50-95°	50-95°	40-80°
<b>COLOURS</b>	Full Range	Full Range	Limited Range	Full Range	Limited Range	Limited Range	Black	Limited Range	Full Range	Limited Range	Limited Range	Limited Range	Limited Range
<b>HEAT RESISTANCE (°C)</b>													
Maximum Continuous	75°C	85°C	130°C	95°C	130°C	100°C	150°C	150°C	110°C	205°C	125°C	205°C	180°C
Maximum Intermittent	105°C	115°C	150°C	125°C	160°C	130°C	180°C	180°C	115°C	300°C	160°C	300°C	200°C
<b>LOW TEMPERATURE RESISTANCE</b>	-60°C	-55°C	-50°C	-40°C	-25°C	-20°C	-20°C	-40°C	-40°C	-60°C (special grades - 80°C)	-30°C	-20°C	-60°C
<b>RESISTANCES</b>													
Oxidation	Fair	Fair	Excellent	Very Good	Excellent	Good	Excellent	Excellent	Good	Excellent	Excellent	Outstanding	Excellent
Ozone & Weathering	Poor	Poor	Outstanding	Very Good	Outstanding	Fair	Excellent	Excellent	Good	Outstanding	Very Good	Outstanding	Outstanding
<b>OIL RESISTANCE</b>													
*ASTME Oil No. 1 @ 20°C	Poor	Poor	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
@ 100°C	Unsatisfactory	Unsatisfactory	Unsatisfactory	Good	Good	Good	100°C Excellent 150°C Good	100°C Excellent 125°C Excellent	Fair	Good	Excellent	150°C Excellent	150°C Excellent
*ASTME Oil No. 3 @ 20°C	Unsatisfactory	Unsatisfactory	Unsatisfactory	Good	Excellent	Excellent	Excellent	Excellent	Fair	Good	Fair	Excellent	Excellent
@ 100°C	Unsatisfactory	Unsatisfactory	Unsatisfactory	Fair	Fair	Good	100°C Good 150°C Fair	100°C Fair 150°C Poor	Fair	Fair	Fair	150°C Excellent	150°C Excellent
<b>FUEL RESISTANCE</b>													
*ASTME Fuel B @ 40°C	Unsatisfactory	Unsatisfactory	Unsatisfactory	Poor	Poor	Fair	Poor	Unsuitable	Poor	Unsuitable	-	Excellent	Fair (good at low temp)
<b>SOLVENT RESISTANCE (20°C)</b>													
Alcohol	Good	Good	Good	Good	Good	Good	Good	Fair	Good	Good	Excellent	Good	Good
Acetone	Fair	Fair	Good	Fair	Fair	Unsatisfactory	Unsatisfactory	Fair	Unsatisfactory	Fair	Good	Unsuitable	Unsuitable
Benzene	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory	Unsatisfactory	Fair	Good	Good
<b>CHEMICAL RESISTANCE</b>													
Acids	Fair	Fair	Good	Good	Very Good	Good	Poor	Fair	Good	Fair	Good	Excellent	Good
Bases	Good	Good	Fair	Fair	Good	Fair	Poor	Good	Very Good	Fair	Good	Good	Fair
<b>PHYSICAL STRENGTH</b>	Excellent	Good	Good	Good	Good	Good	Good	Good	Good	Poor	Good	Good	Poor
<b>COMPRESSION SET</b>	Good	Good	Fair to Good	Fair to Good	Fair	Good	Good	Fair	Fair	Good	Good	Good	Good
<b>TEAR &amp; ABRASION RESISTANCE</b>	Excellent	Good	Good	Good	Good	Good	Good	Good	Good	Poor	Very Good	Good	Poor
<b>RESILIENCE</b>	Excellent	Good	Very Good	Very Good	Fair	Good	Very Poor	Fair	Good	Good	Fair	Fair	Fair
<b>PERMEABILITY TO GASES</b>	Poor	Fairly Low	Low	Low	Low	Low	Low	Very Low	Fairly Low	Fairly Low	Good	Very Low	Fairly Low
<b>ELECTRICAL STRENGTH</b>	Excellent	Excellent	Good	Good	Good	Poor	Fair	Good	Excellent	Excellent	Poor	Good	Excellent
<b>FLAME RESISTANCE</b>	Poor	Poor	Self-Extinguishing	Self-Extinguishing	Good	Poor	Poor	Fair	Retardant Grades Available	Good	Poor	Self-Extinguishing	Self-Extinguishing
<b>WATER RESISTANCE</b>	Very Good	Good	Good	Good	Very Good	Good	Poor	Good	Good	Good	Very Good	Good	Good

The aromatic content of oil has a moderate swelling effect on rubber. ASTM Oil No.1 (Flash point 243°C, Aniline point 124°C) has a swelling effect. ASTM Oil No.3 (Flash point 163°C, Aniline point 70°C) has a severe swelling effect. Both oils are petroleum based and are fully described in ASTM D471.

•Bayer Registered Trademark  
 †Monsanto Registered Trademark  
 \*Du Pont Registered Trademark