

◎ Excellent    ◦ Good    △ Fair    × Poor

Common name (ASTM)	NATURAL RUBBER (NR)	ISOPRENE RUBBER (IR)	STYRENE BUTADIENE RUBBER (SBR)	BUTADIENE RUBBER (BR)	POLYCHLOROPRENE (Neoprene) (CR)	BUTYL RUBBER (IIR)	NITRILE RUBBER (NBR)	ETHYLENE PROPYLENE RUBBER (EPM,EPDM)	CHLOROSULPHONATED POLYETHYLENE (Hypalon) (CSM)	ACRYLIC RUBBER (ACM)	SILICONE RUBBER (SI)	FLUORO-ELASTOMERS (Viton) (FKM)
Chemical name	cis-polyisoprene	Synthetic cis-polyisoprene		Polybutadiene		Isobutylene-isoprene copolymer	acrylonitrile-butadiene copolymer	Ethylene propylene copolymer, or a		Alkyl acrylate copolymer	Polysiloxane	
Specific Gravity	0.92	0.92~0.93	0.93~0.94	0.91~0.94	1.15~1.25	0.91~0.93	1.00~1.20	0.86~0.87	1.11~1.18	1.09~1.10	0.95~0.98	1.80~1.82
Mooney Viscosity ML1+(100°C)	90~150	55~90	30~60	35~55	45~120	45~75	30~100	50~150	30~55	45~60	liquid	65~180
Physical Properties	NR	IR	SBR	BR	CR	IIR	NBR	EPM,EPDM	CSM	ACM	SI	FKM
Hardness (Shore A)	10~100	20~200	30~100	30~100	10~90	20~90	15~100	30~90	50~90	40~90	30~90	50~90
Tensile Strength (Kg/cm2)	30~300	150~200	50~200	20~200	50~250	50~150	50~250	50~200	70~200	70~120	40~100	70~200
Elongation(%)	1000~100	1000~100	8800~100	8008~100	1000~100	800~100	800~100	800~100	500~100	600~100	500~50	500~100
Resiliency	◎	◎	◦	◎	◎	△	◦	◦	◦	△	◎	△
Tear Resistance	◎	◦	△	◦	◦	◦	◦	△	◦	△	x~△	◦
Abrasion Resistance	◎	◎	◎	◎	◦~◎	◎	◎	◦	◎	◦	x~△	◎
Cracking Resistance	◎	◎	◦	△	◦	◎	◦	◦	◦	◦	x~◦	◦
Maximum Service Temperature (°C)	120	120	120	120	130	150	130	150	150	180	280	300
Minimum Service Temperature (°C)	-50 ~-70	-50 ~-70	-30 ~-60	-73	-35 ~-55	-30 ~-55	-10 ~-20	-40 ~-60	-20 ~-60	0~30	-70~-120	-10~-50
Aging Resistance	◦	◦	◦	◦	◎	◎	◎	◎	◎	◎	◎	◎
Light Resistance	◦	◦	◦	◦	◎	◎	◎	◎	◎	◎	◎	◎
Ozone Resistance	x	x	x	x	◎	◎	x	◎	◎	◎	◎	◎
Flame Resistance	x	x	x	x	◦	x	△	x	△	x~△	x~◦	◎
Insulation (Ωcm)	15 10 10~ 10	15 10 10~ 10	15 10 10~ 10	14 15 10~ 10	10 15 10~ 10	16 18 10~ 10	2 18 10~ 10	10 15 10~ 10	14 10	2 8 10~ 10	11 15 10~ 10	15 18 10~ 10
Air Impermeability	◦	◦	△	◦	◎	◎	◦	◎	◦	◎	△	◎
Radiation Resistance	△~◦	△~◦	◦	x	△~◦	x	△~◦	x	△~◦	x~◦	△~◎	△~◦
Solvent Resistance	NR	IR	SBR	BR	CR	IIR	NBR	EPM,EPDM	CSM	ACM	SI	FKM
Gasoline, Naphtha	x	x	x	x	◦	x	◎	x	◦	◎	x~△	◎
Benzene, Toluene	x	x	x	x	x	△~◦	x~◦	△	x~△	x	x~△	◎
Aliphatic Hydrocarbons	◎	x	x	x	x	x	x	x	x~△	x	x~◦	◦
Alcohol	x	◎	◎	◎	◎	◎	◎	◎	◎	x	◎	◎
Ester	△~◦	x	x	x	x~△	△~◦	x~△	◦	x	x	x~△	x~△
Ketones	x~△	△~◦	△~◦	△~◦	△~◦	x	x	◎	△~◦	x	◦	x
Ethyl Acetate	◎~△	x~△	x~△	x~◦	x	◎	x~△	◎	x	x	△	x
Acid / Alkali Resistance	NR	IR	SBR	BR	CR	IIR	NBR	EPM,EPDM	CSM	ACM	SI	FKM
Water	x	◎	◎	◎	◎	◎	◎	◎	◎	△	◦	◎
Organic Acid	x	x	x	x	x~△	△~◦	x~△	x	△	x	◦	x
High Consistency Inorganic Acid	◦	x	x	x	◦	△	◦	◦	◎	△	△	◎
Low Consistency Organic Acid	◦	◦	◦	◦	◎	◎	◦	◎	◎	◦	◦	◎
High Consistency Alkali	◦	◦	◦	◦	◎	◎	◦	◎	◎	△	◎	x
Low Consistency Alkali		◦	◦	◦	◎	◎	◦	◎	◎	◦	◎	△