TYPICAL PROPERTIES OF ELASTOMERS

ANSI/ASTM Designation	NR/IR	AU/EU	CR	EPDM	FKM	HNBR	NBR	TFE/P	VMQ
Common Name	Natural Rubber	Polyurethane	Chloroprene (Neoprene)	EPDM	Viton®	Hydrogenated Nitrile	Nitrile	Aflas®	Silicone
Low Temp	-60°F	-40°F	-30°F	-40°F	-10°F	-22°F	-30°F	25°F	-80°F
High Temp	220°F	175°F	212°F	300°F	400°F	300°F	250°F	450°F	420°F
Durometer Shore A	30-90 Shore A	10-100 Shore A	15-95 Shore A	30-90 Shore A	50-95 Shore A	55-95 Shore A	20-100 Shore A	60-100 Shore A	25-85 Shore A
Abrasion	Fair - Good	Excellent - Outstanding	Very Good – Excellent	Good - Excellent	Good	Good-Excellent	Good-Excellent	Good-Excellent	Poor
Adhesion	Excellent	Excellent	Excellent	Good - Excellent	Fair - Good	Excellent	Excellent	Fair - Good	Excellent
General Properties	Excellent physical properties including abrasion and low temperature resistance. Poor resistance to petroleum-based fluids.	Good aging and excellent abrasion, tear, and solvent resistance. Poor high temperature properties.	Good Weathering Resistance. Flame retarding. Moderate resistance to petroleum-based fluids.	Excellent ozone, chemical, and aging resistance. Poor resistance to petroleum-based fluids.	Excellent oil and air resistance both at low and high temperatures. Very good chemical resistance.	Excellent heat and oil resistance, improved fuel and ozone resistance (approximately 5X) over Nitrile Good abrasion resistance. Decreased elasticity at low temperatures with hydrogenation over standard nitrile.	Excellent resistance to petroleum-based fluids. Good physical properties.	High temperature polymer, good overall chemical resistance, poor compression set and a high minimum working temperature.	Excellent high and low temperature properties. Fair physical properties.
General Chemical Resistance									
Resistant to:	Most moderate chemicals, wet or dry, organic acids, alcohols, ketones, aldehydes.	Ozone, hydrocarbons, moderate chemicals, fats, oils, greases.	Moderate chemicals and acids, ozone, oils, fats, greases, many oils, and solvents.	Animal and vegetable oils, ozone, strong and oxidizing chemicals.	All aliphatic, aromatic and halogenated hydrocarbons, acids, animal and vegetable oils.	Many hydrocarbons, transmission fluids, refrigerants, diluted acids, hydraulic fluids, silicone oils, vegetable and animal fats and oils, water and steam.	Many hydrocarbons, fats, oils, greases, hydraulic fluids, chemicals.	Highly resistant to a wide range of chemicals, such as acid, base and steam. Superior resistance to strong bases in comparison with FKM.	Moderate or oxidizing chemicals, ozone, concentrated sodium hydroxide.
Attacked by:	Ozone, strong acids, fats, oils, greases, most hydrocarbons.	Concentrated acids, ketones, esters, chlorinated and nitro hydrocarbons.	Strong oxidizing acids, esters, ketones, chlorinated, aromatic and nitro hydrocarbons.	Mineral oils and solvents, aromatic hydrocarbons.	Ketones, low molecular weight esters and nitro containing compounds.	Chlorinated hydrocarbons, ketones, strong acids.	Ozone (except PVC blends), ketones, esters, aldehydes, chlorinated and nitro hydrocarbons.	Attacked to varying degrees by strong caustics; polar solvents such as acetone and MEK; ammonia; hydrogen sulfide; high ph amine corrosion inhibitors and red fuming nitric acid	Many solvents, oils, concentrated acids, dilute sodium hydroxide

INFORMATION FOR REFERENCE ONLY

Temperature ranges and resistance capabilities vary with application and individual compound formulation.