

BASE POLYMER	NITRILE	POLYACRYLATE	SILICONE	FLUORILASTOMER
Material Code	N	P	S	V
Temperature Range	-40°F - 250°F 30°C - 120°C	-20°F - 300°F -30°C - 150°C	-80°F - 400°F -60°C - 200°C	-30°F - 400°F -35°C - 200°C
Oil Resistance	E	E	G	E
Acid Resistance	G	F	F	E
Alkali Resistance	G	X	X	F
Water Resistance	G	F	G	G
Heat Resistance	G	E	E	E
Cold Resistance	G	F	E	F
Wear Resistance	E	E	G	E
Ozone Resistance	G	E	E	E
ASTM D2000 Spec.	2BG715B14B34E014 E034EF11EF21	2DG710A26B16 B36EO16E036	2GE807A19B37 E016E036G11	2GK710A1-10B38

E = Excellent

G = Good for most applications

F = Fair

X = Not recommended

	Advantages:	Disadvantages:
Nitrile	Commonly referred to as Buna-N or NBR and is co-polymer of Butadiene and Acrylonitrile. Good resistance to petroleum oils, water, silicone oils, greases and glycol base fluids. Good abrasion resistance, cold flow and tear resistance.	Poor resistance to ozone and weather aging. Low temperature resistance is fair. Poor cold temperature limit, dry running ability and water resistance. Lower mechanical strength. Fair resistance to water and dry running.
Polyacrylate	Good resistance to mineral oils and gear oils.	Low resistance to hydrocarbon fluids like gasoline or paraffin fluids or steam above 50 psi.
Fluoroelastomer	Good temperature resistance. Commonly chose as high temperature replacement for Nitrile or Polyacrylate.	
Silicone	Broad temperature range. Good ozone resistance. Resistant to compression set.	

TYPE OF FLUID TO BE SEALED	LIP MATERIAL			
	NITRILE	POLYACRYLATE	SILICONE	FLUORILASTOMER
Engine Oil	E	E	G	E
Gear Oil	G	G	X	E
Turbine Oil No. 2	G	G	G	E
Machine Oil No. 2	G	G	F	E
Automatic Transmission Fluid	E	E	F	E
Petroleum Base Lubricating Oil	E	E	F	E
Gasoline	F	X	X	E
Light Oil/Kerosene	F	X	X	G
Cutting Oil	E	G	F	E
Grease	E	E	E	E
E.P. Lubricants	G	E	X	E
Water-Glycol	E	X	G	G
Alcohol	E	X	G	F
20% Hydrochloric Acid Solution	F	F	F	E
30% Sulfuric Acid Solution	F	F	X	E