



Elastomer Compatibility

Oilfield Sealing

Chart is provided as a reference guide only
We suggest to use this as a starting point only.

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Property Compatibility Rankings:

VG	Very Good performance, highly recommended
G	Good performance under all conditions
F	Fair/limited performance, Satisfactory only if low temp/conc.
P	Poor: Little or no tolerance to the chemical. DO NOT USE

Material Code		NBR	HNBR	FKM	TFEP	FFKM	FFKM
Chemical Nature		Nitrile	Hydrogenated Nitril	VF2 Fluoroelastomer	TFE/P Fluoroelastomer	Perfluoroelastomer	Perfluoroelastomer
Common Trade Name		Buna-N	Therban	Viton	Aflas	Chemrez	Kalrez
ASTM D200		BF/CH	CH	HK	HK	HK	HK
Low Temp Duty °F (°C)		-22 (-30)	-4 (-20)	14 (-10)	86 (30)	32 (0)	95 (35)
High Temp Duty °F (°C)		248 (120)	302 (150)	392 (200)	428 (220)	446 (230)	500 (260)
Chemical Properties							
Aliphatic Hydrocarbons		G	G	G	F	G	G
Aromatic Hydrocarbons		P	F	G	F	G	G
Crude Oil at < 248 (120°C)		G	G	G	F	G	G
Crude Oil at > 248 (120°C)		P	F	F	F	G	G
Sour Crude Oil		F	G	F	F	F	F
Sour Natural Gas		F	G	F	F	F	F
Oil-based Mud		G	G	G	F	G	G
Water-based Mud		G	G	G	G	G	G
Water		G	G	F	G	G	G
Steam		P	F	P	G	G	G
Amine Corrosion Inhibitors		F	F	F	G	G	G
Brines:	CaCl ₂ / CaBr ₂	G	G	G	G	G	G
	ZnBr ₂	P	F	G	G	G	G
	Seawater	G	G	G	G	G	G
Control Fluids:	Mineral Oils	G	G	G	F	G	G
	Glycol-based	G	G	G	G	G	G
	Phosphate Water	P	P	G	G	G	G
	Methanol	G	G	F	G	G	G
Acids:	HCl (dil)	F	F	G	G	G	G
	HCl (conc)	P	P	G	G	G	G
	HF (<65% cold)	F	F	G	G	G	G
	Chlorine Solvents	P	F	G	P	G	G
	Methane	G	G	G	F	G	G
	Carbon Dioxide	G	G	F	G	G	G
	H ₂ S at < 176 (80°C) < 100ppm	G	G	G	G	G	G
H ₂ S at > 302 (150°C) > 15%	P	P	F	F	G	G	
Physical Properties							
Tear Resistance		G	G	G	F	F	F
Abrasion Resistance		G	G	G	F	F	F
Compression Set Resistance		VG	G	G	F	P	P
Resilience		F	F	P	P	P	P
Gas Impermeability		F	G	VG	G	VG	VG