

FLUID AND CORROSION COMPATIBILITY

Several factors must always be considered in using a rubber part in service, including:

- **The Temperature of Service:** Higher temperatures increase the effect of all chemicals on polymers. The increase varies with the polymer and the chemical. A compound quite suitable at room temperature might fail miserably at elevated temperatures.
- **Conditions of Service:** A compound that swells badly might still function well as a static seal yet fail in any dynamic application.
- **The Grade of the Polymer:** Many types of polymers are available in different grades that vary greatly in chemical resistance.
- **The Compound Itself:** Compound designed for other outstanding properties may be poorer in performance in a chemical than one designed especially for fluid resistance.

Fluid Chart Key	Natural Rubber	Buna N	EPDM	Hypalon	Viton
Material & ASTM Designation	Natural Rubber NR Isoprene IR	Nitrile NBR	Ethylene Propylene EPDM EPDM	Hypalon CSM	Fluoro Elastomer FPM
Chemical Group	Poly Isoprene	Butadiene Acrylonitrile Copolymer & Terpolymer	Ethylene Propylene Copolymer & Terpolymer	Chloro-Sulfonated Polyethylene	Fluorocarbon Polymer
Generally Resistant To:	Most moderate Chemicals- Wet or Dry, Organic acids, Alcohols, Ketones, Aldehydes	Many Hydrocarbons, Fats, Oils, Greases, Hydraulic Fluids, Chemicals	Animal & Vegetable oils, Ozone, Strong and Oxidizing chemicals	Similar to Neoprene with improved Acid resistance	All Aliphatic. Aromatic and Halogenated Hydrocarbons, Acids, Animal & Vegetable Oils
Generally Attacked By:	Ozone, Strong Acids, Fats, Oils, Greases, Most Hydrocarbons	Ozone, Ketones, Esters, Aldehydes, Chlorinated & Nitro Hydrocarbons (Except PVC blends)	Mineral Oils & Solvents, Aromatics Hydrocarbons	Concentrated Oxidizing Acids, Esters, Ketones, Chlorinated, Aromatic & Nitro Hydrocarbons	Ketones, Low Mole Weight Esters & Nitro Containing Compounds