NELSON JAMESON INC.

Pipeline Gasket Reference Guide

Item/Material	Temperature Range	Chemical Resistance[1]					Tear Resistance	Durometer[2]	General Information
		Nitric Acid	Phosphoric Acid	Sodium Hypochlorite	Chlorine	Fats/Oils			
Standard									
Buna-N	-40 to 225°F	Poor	Excellent	Poor	Poor	Excellent	Excellent	72	Standard Dairy & Food industry gasket. High volume equates to lowest cost. Does not hold up well to Nitric based CIP cleaners. Standard black, also white.
EPDM	-60 to 300°F	Fair	Excellent	Excellent	Poor	Good	Fair	70	Good general Dairy and Food gasket. Better overall chemical resistance than Buna—not quite as good fat/oil. Standard black, also white.
Viton	-20 to 400°F	Excellent	Excellent	Excellent	Fair	Excellent	Excellent	80	Best overall chemical resistance of common rubber gaskets. Highest price point. Standard black, also white.
Silicone	-80 to 450°F	Poor	Poor	Good	Poor	Good	Fair	70	More common in pharmaceutical than dairy. Good overall chemical resistance. Excellent temp range. Softer durometer. Generally white or red color.
Teflon	-100 to 500°F	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	56	Excellent chemical & temp resistance. Very hard durometer can make sealing difficult in pipeline gasket application. Standard white, also blue.
Specialty									
Poly-SS	-320 to 550°F	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	68	Passivated Stainless Steel & Teflon blended in molten state (prior to molding). Highest chemical & temp resistance. Hard Durometer. Highest price point.
Metal Detectable	See base rubber	See base rubber	See base rubber	See base rubber	See base rubber	See base rubber	See base rubber	See base rubber	Ferrous powder mixed with rubber in molten state (prior to molding). Has same general characteristics as base rubber. Standard in Silicone & Buna. Blue color.
Color-Coded	See base rubber	See base rubber	See base rubber	See base rubber	See base rubber	See base rubber	See base rubber	See base rubber	Color code by area or date changed. Has same general characteristics as base rubber. Standard Buna. Others with minimum.
Teflon Envelope	-20 to 400°F	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	65-75	A "sandwich" Teflon wrapped around Viton. Gives some better sealing than standard Teflon, but still not as good as rubber.

[1]Information from Rubber Fab Chemical Resistance Chart. Phosphoric Acid—20%; Nitric Acid—Dilute; Chlorine—Wet.

[2]Typical—actual may vary depending on manufacturer.