

Topic: Various materials, their properties and performance under various conditions

Job Title & Industry: Design Engineer – Commercial Window & Door Manufacturer

Our Solution: Silicone and Colored EPDM Energy Seals

Material (Chemical Name)	Physical Properties	
<p style="text-align: center;">EPDM <i>Ethylene Propylene</i></p>	• Specific Gravity	0.86
	• Durometer Range	30-90
	• Tensile Strength	VG
	• Elongation	G
	• Compression Set	G
	• Heat Resistance	VG-E
	• Rebound	G
	• Impact resistance	G
	• Abrasion resistance	G-E
	• Tear Resistance	F-G
	• Cut growth	G
	• Flame resistance	P
	• Impermeability, Gas	F-G
	• Weathering Resistance	E
	• Low Temperature Limit	-20° to -60° F
• High Temperature Limit	300° to 350° F	

Chemical Resistance Properties	
Acid	Good
Alcohols	Fair to Good
Aliphatic Hydrocarbon Solvents	Poor
Alkali	Very Good
Animal & Vegetable oils	Good
Aromatic Hydrocarbon Solvents	Poor
Oil & Gasoline	Poor
Oxygenated Solvents	Very Good
Water	Excellent

E = Excellent P = Poor G = Good VG = Very Good F = Fair

Material (Chemical Name)	Physical Properties	
Silicone <i>Polysiloxane</i>	• Specific Gravity	0.95 to 1.20
	• Durometer Range	25-90
	• Tensile Strength	F-G
	• Elongation	VG-E
	• Compression Set	G-E
	• Heat Resistance	E
	• Rebound	G
	• Impact resistance	P-G
	• Abrasion resistance	P-F
	• Tear Resistance	P-F
	• Cut growth	P-F
	• Flame resistance	F-G
	• Impermeability, Gas	F-G
	• Weathering Resistance	E
	• Low Temperature Limit	-65° to -100° F
• High Temperature Limit	400° to 550° F	

E = Excellent P = Poor G = Good VG = Very Good F = Fair

Chemical Resistance Properties	
Acid	Fair
Alcohols	Good
Aliphatic Hydrocarbon Solvents	Poor to Fair
Alkali	Poor
Animal & Vegetable oils	Good
Aromatic Hydrocarbon Solvents	Poor - Fair
Oil & Gasoline	Poor to Fair
Oxygenated Solvents	Fair
Water	Good to Excellent