

# JACKET & INSULATION MATERIALS COMPARISON CHART

## THERMOPLASTIC PROPERTIES

Insulation or Jacket Material	Chlorinated Polyethylene (CPE)	Polyvinyl Chloride (PVC)	Lowdensity Polyethylene (LDPE)	Cellular Polyethylene	Highdensity Polyethylene	Polyurethane	Polypropylene	Nylon	Teflon®	TPE
Oxidation Resistance	E	E	E	E	E	E	E	E	O	E
Heat Resistance	G-E	G-E	G	G-E	E	E	G	E	O	G
Oil Resistance	E	E	G-E	G-E	G-E	G-E	E	E	O	P
Low Temp. Flexibility	G	P-G	G-E	E	E	E	G	G	O	E
Weather Resistance	E	G-E	E	E	E	E	F-G	E	O	E
Ozone Resistance	E	E	E	E	E	E	E	E	E	E
Abrasion Resistance	E	F-G	F-G	G	E	F-G	O	E	G-E	F
Electrical Properties	F	F-G	E	E	E	E	G	F	E	G
Flame Resistance	F	E	P	P	P	P	P	P	O	F-G
Nuclear Radiation Resistance	G-E	P-F	G	G	G	F	G	F-G	P-F	F
Water Resistance	G	E	E	E	E	E	P	P-F	E	E
Acid Resistance	G-E	G-E	G-E	G-E	G-E	E	F	E	E	G
Alkali Resistance	G-E	G-E	G-E	G-E	G-E	E	F	G	E	G
Gasoline, Kerosene, Etc. (Aliphatic Hydrocarbons) Resistance	F	G-E	P-F	P-F	P-F	P-F	F	G	E	P
Benzol, Toluol, Etc. (Aromatic Hydrocarbons) Resistance	F	P-F	P	P	P	P	F	G	E	P
Degreaser Solvents (Halogenated Hydrocarbons) Resistance	P	P-F	P	P	P	P	P	P	E	P
Alcohol Resistance	G	G-E	E	E	E	E	P	P	E	E

Any given property can generally be improved by the use of selective compounding.

### LEGEND

P = Poor  
 F = Fair  
 G = Good  
 E = Excellent  
 O = Outstanding

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## THERMOSET PROPERTIES

Insulation or Jacket Material	Styrene Butadiene Rubber (SBR)	Natural Rubber	Synthetic Rubber	Polybutadiene	Neoprene	Hypalon® Chlorosulfonated Polyethylene (CSPE)	Nitrile or Rubber Butadiene Nitrile (NBR)	Nitrile/ Polychloride (NBR/PVC)	Ethylene Propylene Rubber (EPR)	Crosslinked Polyethylene (XLPE)	Chlorinated Polyethylene (CPE)	Silicone Rubber
Oxidation Resistance	F	F	G	G	G	E	F	E	G	E	E	E
Heat Resistance	F-G	F	F	F	G	E	G	G	E	G	E	E
Oil Resistance	P	P	P	P	G	G	G-E	G	F	G	P	F-G
Low Temp. Flexibility	F-G	G	E	E	F-G	F	F	F	G-E	O	E	O
Weather Resistance	F	F	F	F	G	E	F-G	G	E	G	E	O
Ozone Resistance	P	P	P	P	G	E	P	G	E	E	E	O
Abrasion Resistance	G-E	E	E	E	G-E	G	G-E	E	G	F-G	F	F
Electrical Properties	E	E	E	E	F	G	P	F	E	E	G	O
Flame Resistance	P	P	P	P	G	G	P	G	P	F-G	F-G	O
Nuclear Radiation Resistance	F-G	F-G	F-G	P	F-G	G	F-G	P	G	E	F	E
Water Resistance	G-E	G-E	E	E	G	G-E	G-E	E	G-E	G-E	E	G-E
Acid Resistance	F-G	F-G	F-G	F-G	G	E	G	G	G-E	G-E	G	F-G
Alkali Resistance	F-G	F-G	F-G	F-G	G	E	F-G	G	G-E	G-E	G	F-G
Gasoline, Kerosene, Etc. (Aliphatic Hydrocarbons) Resistance	P	P	P	P	G	F	E	G-E	P	F	P	P-F
Benzol, Toluol, Etc. (Aromatic Hydrocarbons) Resistance	P	P	P	P	P-F	F	G	G	F	F	P	P
Degreaser Solvents (Halogenated Hydrocarbons) Resistance	P	P	P	P	P	P-F	P	G	P	F	P	P-G
Alcohol Resistance	F	G	G	F-G	F	G	E	G	P	E	E	G

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