PROPERTIES OF RUBBER COMPOUNDS

This table is provided as a general guide only.

Common Name	ASTM Designation	Composition	General Properties
Neoprene	CR	Chloroprene	Good weather resistance. Flame retarding. Moderate resistance to petroleum based fluids. Good physical properties.
Natural	NR	Isoprene, natural	Excellent physical properties including abrasion and low temperature resistance. Poor resistance to petroleum based fluids.
Polyisoprene	IR	Isoprene, synthetic	Same properties as natural rubber.
Butyl	IIR	Isobutene-isoprene	Very good weathering resistance. Low permeability to air. Good physical properties. Poor resistance to petroleum based fluids.
Nitrile	NBR	Nitrile-butadiene	Excellent resistance to petroleum based fluids. Moderate resistance to aromatics. Good physical properties.
SBR	SBR	Styrene-butadiene	Good physical properties including abrasion resistance. Poor resistance to petroleum based fluids.
Hypalon	CSM	Chloro-sulfonyl-polyethylene	Excellent ozone, weathering and acid resistance. Good abrasion and heat resistance. Poor resistance to petroleum based fluids.
Ethylene Propylene Rubber	EPDM	Ethylene-propylene-diene-terpolymer	Excellent ozone, chemical and ageing characteristics. Poor resistance to petroleum based fluids.
Chlorobutyl	CIIR	Chloro-isobutene-isoprene	Very good weathering resistance. Low permeability to air. Good physical properties. Poor resistance to petroleum based fluids.
	XLPE	Cross Linked Polyethylene	Excellent resistance to chemicals and petroleum based fluids.
Ultra High Molecular Weight Polyethylene	UHMWPE	Ultra High Molecular Weight Polyethylene	Excellent resistance to most solvents, chemicals and hydrocarbons. Excellent abrasion and wear resistance.

CHEMICAL RESISTANCE OF RUBBERS

The information contained in this table is based upon current knowledge and practice. The resistance as listed should be checked with a sample of the intended product as compounds and additives frequently vary. The resistance tabulated is an indication only and we accept no liability to its accuracy. The data given relates to concentrated and saturated solutions at 20°C unless otherwise stated. The table does not indicate what effect the rubber may have on the chemical.

Resistance Rating

A – Recommended, little or no effect. The material is unlikely to be destroyed by the indicated chemical.

B – Minor to moderate effect. The material will probably give satisfactory results but will sooner or later be destroyed by the indicated chemical.

C – Moderate to severe effect. The material may be used to a certain extent in conjunction with the indicated chemical if the contact period is short. Continuous contact will destroy the material.

U – Unsuitable and not recommended.

For some materials no data is available and thus no value has been entered.

Abbreviations/Rubber Materials

NR	=	Natural Rubber
IR	=	Isoprene Rubber
SBR	=	Styrene Rubber
BR	=	Butadiene Rubber
IIR	=	Butyl Rubber
EPDM		
EPM	=	Ethylene Propylene Rubber
ECO		
CO	=	Epichlorohydrin Rubber
NBR	=	Nitrile Rubber
EU	=	Urethane Rubber (Polyeter)
CR	=	Chloroprene Rubber (Neoprene)
CSM	=	Chlorosulphonylpolyethylene (Hypalon)
AU	=	Urethane Rubber (Polyester)
T	=	Polysulphide Rubber (Thiokol)
Si	=	Silicone Rubber
FSi	=	Fluorosilicone Rubber
FPM	=	Fluorinated Rubber (Viton)
ACM	=	Acrylate Rubber
XLPE	=	Cross Linked Polyethylene
UHMWPE	=	Ultra High Molecular Weight Polyethylene