

ADVANTAGES AND LIMITATIONS OF SOME ELASTOMER TYPES

RUBBER TYPE	NAME	MAIN ADVANTAGES	LIMITATIONS
NR	Natural Rubber (cis-polyisoprene)	<ul style="list-style-type: none"> • Good dynamic prop. • Good tensile and tear strength • Good abrasive resistance 	<ul style="list-style-type: none"> • Poor resistance to chemicals and oil substances • No longtime exposure to sunlight, ozone and heat
SBR	Styrene-butadiene Rubber	<ul style="list-style-type: none"> • Good tensile strength, dynamic prop. and abrasive resistance • Good substituent for NR (but sometimes more cost-efficient) 	<ul style="list-style-type: none"> • Poor resistance to chemicals and oil substances • No longtime exposure to sunlight, ozone and heat
BR	(poly-)Butadiene Rubber	<ul style="list-style-type: none"> • Excellent dynamic properties • Good cold resistance • Good tear strength 	<ul style="list-style-type: none"> • Poor resistance to chemicals and oil substances • No longtime exposure to sunlight, ozone and heat
EPDM	Ethylene Propylene Diene Monomer	<ul style="list-style-type: none"> • Excellent resistance to ozone, oxidants and weather (water) conditions • Good heat resistance • Excellent insulator • Good chemical resistance (not oil) 	<ul style="list-style-type: none"> • Poor resistance to oil substances • Less mechanical properties compared to NR
CR	Chloroprene Rubber (Neoprene)	<ul style="list-style-type: none"> • Good resistance to ozone, weather conditions (water) and sunlight • Good chemical and medium oil resistance • Good high temperature resistance • Good all-round rubber 	<ul style="list-style-type: none"> • More expensive than general purpose synthetic rubbers • No resistance to strong oxidizing acids, esters, ketones, chlorinated – and aromatic hydrocarbons
NBR	(Acrylo-)Nitrile Butadiene Rubber	<ul style="list-style-type: none"> • Good oil and solvent resistance • Good heat resistance • Good mechanical properties • Good resistance to gas permeability 	<ul style="list-style-type: none"> • Not good resistance to ozone, ketones, esters, aldehydes and chlorinated hydrocarbons • Higher price only justified when oil resistance is required
HNBR	Hydrogenated Nitrile Butadiene Rubber (Therban)	<ul style="list-style-type: none"> • Very good heat and low temp. resistance • Good oil and solvent resistance • Good ozone and weather resistance • Good mechanical properties 	<ul style="list-style-type: none"> • High cost
MVQ	Methyl Vinyl Silicone Rubber (Silicon)	<ul style="list-style-type: none"> • Excellent heat resistance • Very good low temperatures resistance • Good insulator 	<ul style="list-style-type: none"> • Higher price only justified when excellent heat resistance is required • Low tensile strength
FPM	Fluoropolymer (Viton)	<ul style="list-style-type: none"> • Excellent heat resistance • Excellent chemical, ozone, weather, oil and solvent resistance • Good resistance to gas permeability 	<ul style="list-style-type: none"> • Very high price • Intermediate mechanical properties

IIR	Isobutene-Isoprene Rubber (butyl rubber)	<ul style="list-style-type: none"> • Excellent resistance to gaspermeability • Good resistance to chemical, ozone, weather and oil 	<ul style="list-style-type: none"> • Intermediate mechanical properties
CSM	Chlorosulphonated Polyethylene (Hypalon)	<ul style="list-style-type: none"> • Good heat resistance • Good ozone and weather (water) resistance • Good chemical resist. • Color-proof • Excellent abrasive resistance 	<ul style="list-style-type: none"> • Intermediate oil resistance

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