General properties of the common elastomers

Rating guide

excellent	↑
good	↗
fair	→
questionable	↘
poor	↓

	IIR *butyl*	**EPDM** *ethylene-propylene*	**FKM** *viton*	**FMQ** *fluoro-silicone*	**CSM** *hypalon*	**FFKM** *kalrez*	**CR** *neoprene*	**NBR** *nitrile rubber*	**TPU** *polyurethane*	**MQ** *silicone*	**SBR** *styrene-butadiene*	**PTFE** *teflon*
Economy	→	↗	→	↓	→	↓	↗	↑	↑	→	↑	↓
Temperature range °C	-40 +150	-50 +150	-30 +200	-50 +200	-20 +120	-45 +300	-30 +80	-30 +110	-40 +100	-60 +230	-50 +100	-200 +200
Tensile strength	–	↗	→	↓	↗	→	→	↗	↑	↓	↗	→
Elongation max. %	800	600	300	600	500	150	600	600	500	800	600	250
Hardness range °ShA	40 80	40 90	50 95	50 80	50 90	65 95	40 90	40 90	40 94	25 80	40 90	98
Resilience - Rebound	↓	↗	→	↗	→	–	↑	↗	↑	→	↗	↓
Compression set	→	→	↗	↑	→	↗	→	↗	→	↑	↗	↓
Adhesion to metals	↗	→	→	↘	↑	–	↑	↑	→	↗	↑	↑
Abrasion resistance	→	↗	↗	↓	↑	–	↑	↗	↑	↓	↑	→
Tear resistance	↗	→	→	↘	→	–	↗	↗	↑	↓	→	↓
Weather resistance	↑	↑	↑	↑	↑	–	↑	↘	↗	↑	↓	↑
Ozone resistance	↑	↑	↑	↑	↑	–	↑	↓	↑	↑	↓	↑
Water swell resistance	↑	↑	↗	↑	→	↑	→	↗	↓	↑	↑	↑
Steam resistance	↗	↑	↓	↓	↓	↑	↓	↓	↓	↘	↓	–
Gas impermeability	↑	→	↑	↓	↗	–	↑	↑	↑	↓	→	↗
Acid resistance	↑	↗	↑	↗	↑	↑	→	↗	↓	→	→	↑
Alkali resistance	↑	↑	→	→	↑	↑	↑	↗	→	↑	→	↗
Alcohols	↑	↑	→	↗	↑	↑	↑	↑	↓	↑	↑	↑
Mineral oils	↓	↓	↑	↑	→	↑	↗	↑	↗	↓	↓	↑
Aliphatic hydrocarbons	↓	↓	↑	→	→	↑	→	↑	→	↓	↓	↑
Aromatic hydrocarbons	↓	↓	↑	→	↘	↑	↓	↓	→	↓	↓	↑
Halogenated hydrocarb.	↓	↓	↑	↘	↘	→	↓	↘	→	↓	↓	↑
Phosphate ester	↗	↑	↓	↘	↓	↑	↓	↓	↓	↓	↓	–
Polar solvents	↗	↑	↓	↓	↓	↑	↓	↓	↓	↓	↓	↑