

Typical Characteristics of Elastomers

We are just flexible as our bellows. Most of the bellows described in this catalog are normally made of NBR (nitrile rubber). If required, they can also be supplied from other materials, e.g. made of CR (chloroprene), SI (silicone), EPDM or FKM (Viton®).

	Nitril Rubber	Chloroprene Rubber	Ethylene Polypropylene Diene Rubber	Silicone Rubber	Fluororubber
International abbreviation	NBR	CR	EPDM	Si	FKM
Trade name (e.g.)	Perbunan	Chloroprene Neoprene	Buna EP Keltan	Silicone	Viton® (Dupont)
Mechanical characteristics at room temperature					
Tensile strength	②	②	③	③	③
Tear strength / tear resistance	③	②	③	③	④
Abrasion resistance	①	③	③	④	④
Compression set after constant strain	at high temperatures	③	②	①	①
	at low temperatures	③	③	①	④
Thermal properties					
Low-temperature flexibility down to °C	- 30	- 35	- 50	- 65	- 15
Max. service temperature in °C	+100	+100**	+130*	+200	+230
Resistance against:					
Gasoline	②	④	⑤	④	①
Mineral oil (at 100°C)	①	③	⑤	③	①
Acids (25% sulphuric acid at 50°C)	③	②	①	③	①
Lyes (50%ige caustic soda at 50°C)	④	②	①	⑤	①
Water (at 100°C)	③	③	①	②	②
Weathering and ozone	④	①	①	①	①
Air impermeability	②	③	③	⑤	②
Ageing	②	②	①	①	①

① = very good ② = good ③ = satisfactory ④ = not satisfactory ⑤ = insufficient

This table can only serve as a rough guideline for the properties of the different types of elastomers.

As individual operation conditions influence the application of each product, the information supplied in this catalogue can only be seen as a rough guideline. In every case it is the sole responsibility of the customer to evaluate his individual requirements, in particular whether specified properties of our products are sufficient for the intended use.