Typical Characteristics of Elastomers

HALLTECH

We are just as flexible as our bellows. Most of the bellows described in this catalog are normally made of nitrile rubber (NBR).
However, starting with orders for as few as 35 units we will also make these bellows of NR, CR oder Si.

		Nitril Rubber	Natural Rubber	Chloroprene Rubber	Ethylene Polypropylene Diene Rubber	Silicone Rubber
International abbreviation		NBR	NR	CR	EPDM	Si
Trade name (e.g.)		Perbunan	SMR	Chloroprene Neoprene	Buna EP Keltan	Silicone
Mechanical characteristics at room temperature						
Tensile strength		2	1	2	3	3
Elongation at break		2	1	2	3	2
Rebound resilience		3	1	3	2	2
Tear strength / tear resistance		3	1	2	3	3
Abrasion resistance		1	3	3	3	4
Compression set after constant strain	at high temperatures	3	4	3	2	1
	at low temperatures	3	2	3	3	1
Thermal properties						
Low-temperature flexibility down to °C		- 30	- 55	- 35	- 50	- 65
Max. service temperature in °C		+100	+80	+100**	+130*	+200
Resistance against:						
Gasoline		2	5	4	5	4
Mineral oil (at 100°C)		1	5	3	5	3
Acids (25% sulphuric acid at 50°C)		3	4	2	1	3
Lyes (50%ige caustic soda at 50°C)		4	3	2	1	5
Water (at 100°C)		3	4	3	1	2
Weathering and ozone		4	3	1	1	1
Air impermeability		2	3	3	3	5
Ageing		2	2	2	1	1

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

* = Special compounds up to +220°C ** = Special compounds up to 190°C

This table can only act as a **rough guideline** for the characteristics of the various types Elastomers.