

# Table of soft sealings

Elastomeres and Thermoplasts



15

Ni - short-sign	ISO - short-sign	ASTM - short-sign	Material - type	Range of pressure and temperature limits			Range of application
				Flat seal	O - ring	$\Delta P (P_1/P_2)^2$	

## Elastomere

AF 100	<b>TFE/P</b>	TFE/P	Aflas®	-	< 63 bar - 20°C to +200°C	≤ 25 bar	Good resistance against hot water and steam.
EPDM 1)	<b>EPDM</b>	EPDM	APTK® Ethylen-Propylen-Dien-Kautschuk	≤ 16 bar - 40°C to +120°C - 40°C to +140°C 2)	< 120 bar - 40°C to +140°C - 40°C to +150°C 2)	≤ 25 bar	Good resistance against a lot of chemicals, hot water, steam, alkaline solution, acids, alcohol. Average mechanical characteristics. Ozone resistant, not oil resistant.
FPM 1)	<b>FPM</b>	FKM	Viton® Fluor-Kautschuk	≤ 25 bar - 20°C to +200°C	< 200 bar - 20°C to +200°C	≤ 40 bar	Good resistance against a lot of chemicals, mineral oil, hot air, acid. Average to good mechanical characteristics.
FFKM	-	FFKM	Kalrez® Perfluor-Kautschuk	≤ 25 bar - 30°C to +260°C	< 120 bar - 30°C to +260°C	≤ 40 bar	Very good resistance against a lot of chemicals, oxygen, ozone, mineral oil. Good thermal and mechanical characteristics.
FVMQ	-	-	Silastic Fluorsilikon-Kautschuk	< 10 bar - 60°C to +200°C	< 10 bar - 60°C to +200°C	< 25 bar	Good resistance to oils, fuels and solvents.
PUR 1)	<b>AU</b>	AU	Vulkollan® Polyurethan	≤ 30/35 bar - 30°C to + 80°C	-	< 35 bar	Good resistance against a lot of chemicals, hydraulic oil, alcohol, fuel. Very good mechanical characteristics.
NBR 1)	<b>NBR</b>	NBR	Acrylnitril-Butadien-Kautschuk	-	- 20°C to +120°C	< 25 bar	Good mechanical properties in comparison with other elastomers, a higher abrasion resistance.
Silikon	<b>VMQ</b>	VMQ	Silikon	< 6 bar - 60°C to +200°C	< 10 bar - 60°C to +200°C	≤ 25 bar	Good resistance against hot gas and air. Average mechanical characteristics.
ULT	-	-	Ultrathane®	-	- 30°C to + 80°C	≤ 25 bar	
Vespeel	-	-	Vespeel® Polyimid	40 - 500 bar - 270°C to +250°C	-	≤ 200 bar	Very good resistance against CO <sub>2</sub> . Very good thermal and mechanical characteristics.

## Thermoplasts

Nylon 1)	<b>PA</b>	PA	Nylon® Polyamid	≤ 120 bar do 8 ≤ 50 bar - 40°C to + 80°C	-	≤ 160 bar	Good resistance against a lot of chemicals, fuel, cooling liquid, silicone oil. Good mechanical characteristics.
PEEK 1000	-	-	Ketron	40 - 900 bar - 60°C to +250°C	-	< 200 bar	Very good resistance against a lot of chemicals. Very good thermal and mechanical characteristics.
PTFE 1) PTFE/GL	<b>PTFE</b>	PTFE	Teflon® Polytetrafluorethylen	≤ 15/25 bar - 200°C to +260°C	-	≤ 50 bar	Good resistance against chemicals, acid, alkaline solution, solvent, oil. Good thermal and average mechanical characteristics.
PVDF	-	-	Polyvinylidenfluorid	≤ 45 bar - 40°C to +150°C	-	≤ 100 bar	Very good resistance against chemicals, gasiform oxygen. Very good mechanical characteristics.
RCH 1000	<b>PE</b>	PE	Polyethylen (PE)	≤ 45 bar - 270°C to + 80°C	-	≤ 50 bar	Good resistance against a lot of chemicals, cryogenic media. Good mechanical characteristics.

1) Standard soft sealing

2) Applies only to pressure reducing valves and initial pressure controller

At raised set pressure maximum operating temperatur is reduced.