

Material			Polyurethane										Rubber					
Properties	Standard	Unit	HPU	C-HPU	HPU 55D	C-HPU 57D	C-HPU 72D	LT-PU	HT-PU	SL-PU	PU 93	NBR	NBR 73	H-NBR	FPM	FPM 73	EPDM	MVQ
Color			Red	Red	Yellow	Yellow	Black	Blue	Orange	Dark gray	Green	Black	Black	Green	Brown	Black	Black	Blue
Hardness	ISO 868	Shore A	95±2	96±2				96±2	96±2	96±2	93±3	85±5	75±5	85±5	82±5	73±5	85±5	85±5
Hardness	ISO 868	Shore D	48±3	50±3	55±3	57±3	70±3	50±3	47±3	48±3	47±3							
Ball indentation hardness	DIN 53456 H135/30	MPa																
Tensile strength	DIN 53504	MPa	50	45	45	45	50	45	45	45	50	17	16	20	9	9	12	7
Elongation at break	DIN 53504	%	350	450	340	350	150	450	500	350	500	150	225	190	200	270	80	120
Modulus 100%	DIN 53504	MPa	15	12	20	20	30	12	11	12	13	11	7	10	6	3		4
Modulus 300%	DIN 53504	MPa	28	22	35	33		22	22	22	23							
Rebound elasticity	DIN 53512	%										20	28	30	7	8	37	35
Tear strength	DIN ISO 34-1	kN/mm	110	80	110	110	110	80	80	80	100	18	5	15	20	5	10	15
Spec. gravity	ISO 1183	kg/m ³	1200	1130	1210	1160	1210	1130	1170	1190	1200	1280	1230	1320	2530	2160	1220	1550
Abrasion	DIN 53516	mm ³	17	20	25	25		20	15	15	35	100	100	135	175	216	140	
Compressive strength	DIN 53455	MPa																
Thermal conductivity	DIN 52612	J*10 ³ /m ² *h*k																
Coefficient of thermal expansion		K ⁻¹ *10 ⁻⁵																
Coefficient of friction	DIN 52612																	
Density / Spec. gravity	DIN 53479	kg/m ³																
Compression set *	ISO 815	%	27	30	30	30		25	32	30	25	5	5	12	17	13	7	8
Compression set **	ISO 815	%	33	35	35	35		30	35	35	33	6	8	14	20	13	7	9
Compression set ***	ISO 815	%												22	26			
Temperature min.		°C	-20	-37	-20	-30	-20	-55	-35	-20	-30	-30	-30	-20	-20	-20	-45	-60
Temperature max.		°C	115	110	115	110	110	110	135	110	110	110	90	150	220	210	130	200
Temp. max. water/steam		°C	80		80									120			130	
Temp. max. hot air(short)		°C												180	300	280	180	300
Young's modulus	DIN 53457	MPa																
FDA-approval			Y	Y														
Special compound with FDA approval					Y							Y		Y	Y		Y	Y

*24h 70°C 25% deflection **24h 100°C 25% deflection ***24h 150°C 25% deflection
 The test results are average—results measured from test specimen and cannot be transferred to seal applications.

Material			Fluoropolymer												Thermoplastic			
Properties	Standard	Unit	TFM	PTFE Virgin	PTFE D05	PTFE D08	PTFE Glass	PTFE I	PTFE II	PTFE D46	PTFE Carbon	PTFE E-Carbon	PTFE Graphite	PTFE Ekonol	Hytrek	POM	PA	UHMW-PE
Color			White	White	Turquoise	Orange	White	Grey	Brown	Green	Black	Black	Dark Grey	Cream	Orange	White	Nature	Nature
Hardness	ISO 868	Shore A																
Hardness	ISO 868	Shore D	57±3	55±3	57±3	62±3	60±3	58±3	60±3	63±3	67±3	60±3	60±3	56±3	54±3	85±3	85±3	61±3
Ball indentation hardness	DIN 53456 H135/30	MPa	23±5	23±5	28±5	24±5	24±5	27±5	33±5	35±5	35±5	30±5	26±5	28±5		160	153	36
Tensile strength	ASTM D 4745-79	MPa	30	27	31	26	17	16	22	24	12	24	14	20	28(DIN53504)	70	80	40
Elongation at break	ASTM D 4745-79	%	400	250	270	300	170	185	200	170	45	250	110	250	300(DIN53504)	40	40	50
Modulus 100%	DIN 53504	MPa													15			
Modulus 300%	DIN 53504	MPa																
Rebound elasticity	DIN 53512	%																
Tear strength	DIN ISO 34-1	kN/mm													124			
Spec. gravity	ISO 1183	kg/m ³													1190			
Abrasion	DIN 53516	mm ³													120			
Compressive strength	DIN 53455	MPa		4	4	8	8	8	10	10				11		88	110	
Thermal conductivity	DIN 52612	J*10 ³ /m ² *h*k	0.22	0.8	0.8	1.1	1.3	1.1	4	4.2	3.5	3.5	4	5.4		0.25	0.29	0.41
Coefficient of thermal expansion		K ⁻¹ *10 ⁻³	12-17	19	19	10	10.7	13	8	8.5	10.9	10.9	11.2	8.4		11	8	15
Coefficient of friction				0.08	0.08	0.13	0.16	0.13	0.13	0.15	0.17	0.18	0.14	0.18		0.28	0.4	0.25
Spec. gravity	DIN 53479	kg/m ³		2150	2170	2230	2210	2260	3110	3200	2060	2140	2130	2040		1410	1130	930
Compression set *	ISO 815	%													60			
Compression set **	ISO 815	%																
Compression set ***	ISO 815	%																
Temperature min.		°C	-200	-200	-200	-200	-200	-200	-200	-200	-200	-200	-200	-200	-30	-45	-40	-200
Temperature max.		°C	260	260	260	260	260	260	260	260	260	260	260	260	120	100	110	80
Temp. max. water/steam		°C																
Temp. max. hot air(short)		°C																
Young's modulus	DIN 53457	MPa	640	540	540		1320	1320	1375	1420						3000	3000	680
FDA-approval			Y	Y	Y		Y									Y		Y
Special compound with FDA approval																		

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 The test results are average—results measured from test specimen and cannot be transferred to seal applications.