



TECHNICAL
DATA

PROPERTIES	PVDF	PTFE	PP	PE 300	PE 500	PE 1000	unit	test met.
1 Density	1,78	2,18	0,93	0,95	0,95	0,94	g/cm3	ISO.1183 DIN.53479
2 Water absorption in air 50% r.h.	0	0	0	0	0	0	%	-
3 Absorption 23°C in water-saturat.	0	0	0	0	0	0	%	-

MECHANICAL PROPERTIES	PVDF	PTFE	PP	PE 300	PE 500	PE 1000	unit	test met.
4 Tensile stress at yield at break	55	20	35	28	26	22	N/mm2	ISO.527 DIN.53455
5 Elongation at break	300	500	600	500	600	200	%	ISO.527 DIN.53455
6 Tensile Modulus of elasticity	2000	700	1100	900	800	780	N/mm2	ISO.527 DIN.53455
7 Compression test @ 1% strain 1000h	3	1,5	4	3	3	3	N/mm2	ISO.899 DIN.53444
8 Impact strength Charpy 7,5 J	n.b.	n.b.	n.b.	n.b.	n.b.	n.b.	KJ/m2	ISO.R179 DIN.53453
9 Notched impact strength Charpy	7	14	7	30	50	80	KJ/m2	ISO.179/3C DIN.53453
10 Ball indentation hardness	100	30	75	55	50	40	N/mm2	ISO.2039.1 DIN.53456
11 Rockwell hardness (dry)	R62	D53	R64	R60	R60	R60	-	ISO2039.2
12 Coefficient of friction to steel	0,30	0,10	0,35	0,32	0,32	0,30	-	-

THERMAL PROPERTIES	PVDF	PTFE	PP	PE 300	PE 500	PE 1000	unit	test met.
13 Melting point	180	325	160	127	130	130	-	-
14 Thermal conductivity	0,11	0,24	0,4	0,4	0,4	0,4	w/(km)	DIN.52612
15 Deformation at temp.HDT	95	50	65	50	50	50	°C	ISO.75 DIN.53461
16 Linear.expansion coeffic.23-60 °C	130	14	150	200	200	200	10-6.K-1	-
17 Operating.temperature continuously	140	250	90	80	80	80	°C	-
18 Operat.temperature short.period-no.load	+155	+260	+110	+95	+95	+100	°C	-
19 Min. operating temperature	-50	-200	-10	-30	-30	-50	°C	-
20 Flammability UL 94 (3-6 mm thickness)	V0	V0	HB	HB	HB	HB	-	UL 94
21 Oxygen index (LOI)	43	92	18	18	18	18	%	ISO. 4589

ELECTRICAL PROPERTIES	PVDF	PTFE	PP	PE 300	PE 500	PE 1000	unit	test met.
22 Dielectric constant at 1 MHz.	8	2,1	2,2	2,3	2,3	2,3	-	ISO.250 DIN.53483
23 Dielectric strength	120	11	100	50	50	45	kV/mm	ISO.243 DIN.53481
24 Volume resistivity	10 ¹⁴	10 ¹⁵	10 ¹⁷	10 ¹⁷	10 ¹⁷	10 ¹⁷	Ohm.cm	ISO.93 DIN.53482
25 Dissipation.factor tan.d at 1MHz	0,06	0,0002	0,004	0,004	0,004	0,004	-	ISO.250 DIN.53483

Figures relate to specimen conditioned at 23°C and 50% RH. Figures between brackets relate to dry specimen. Figures for materials marked with * can change according to their moisture content.

12 - Test on ground steel dry specimen load = 0,05 N/mm² speed = 0,6 m/s.

15 - Deformation at temperature. HDT at 1,8 N/mm²

17 - Operating temperature continuously 5000h
From 23°C upwards the materials' features change in an ununiform and disproportional way due to the heat. The quoted limits are indicative and based on a tensile stress of 50% of the value at 23° C.

18 - Operating temperature short period (no load)
19 - The mechanical features decrease with a reduction in temperature and are influenced also by other factors (moisture, etc.). The quoted value does not take into consideration impact conditions or heavy loads.

A = amorphous

All values and information provided are based on information currently in our possession and/or results archived from tests conducted in our laboratories. They are given in good faith and are not legally binding.

For any particular application the technical staff of Omnia Plastics are at your disposal to assist with solving your problem.

technical data

Note Change
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