

Typical Properties of Fluoropolymers & Engineering Plastics

Material	General			Mechanical				Electrical		Thermal		
	Density	Flammability	Water absorption	Tensile strength at 23°C	Elongation at break at 23°C	Rockwell hardness	Shore hardness D	Coefficient of friction	Volume resistivity	Dielectric strength	Coefficient of linear expansion	Maximum continuous operating temperature
	g/cm ³		%	N/mm ²	%				/cm	KV/mm	1/K 10 ⁶	°C
PTFE Virgin	2.14-2.19	NC	0.00	20-40	200-450		55-65	0.05-0.2	10 ¹⁶	40-80	12-16	260
PTFE 25% Glass	2.24	NC		12-20	200-300		60-70	0.07-0.2			11-15	260
PTFE 25% Carbon	2.10	NC		11-16	70-150		60-70	0.1-0.2			8-11	260
PTFE 60% Bronze	3.90	NC		10-14	80-160		65-75	0.07-0.2			9-14	260
PFA	2.12-2.17	NC	<0.03	25-32	300		60-65	0.2-0.3	>10 ¹⁶	50-80	12-16	260
FEP	2.12-2.17	NC	<0.01	19-25	250-350		55-60	0.2-0.3	>10 ¹⁶	50-80	8-14	200
ETFE	1.70-1.75	SE	<0.1	36-48	200-500	R45-55	70-75	0.3-0.5	>10 ¹⁶	60-90	5-9	150-180*
PVDF	1.75-1.78	SE	0.05	30-50	20-250	R100-115	75-85	0.2-0.5	10 ¹⁴	40-80	8-12	150-170*
ECTFE Halar®	1.67-1.70	SE	<0.1	41-54	200-300	R85-95	70-80	0.2	10 ¹⁶	50	4-7	150-180*
PCTFE	2.10-2.16	NC	<0.01	31-42	80-250	R103-118	70-90	0.2-0.3	>10 ¹⁷	50-70	4-8	150-180*
Vespa® SP1	1.35-1.45	SE	1-1.3	45-86	2-8	E45-60		0.2-0.35	10 ¹⁴ -10 ¹⁵		4-6	300
PPS	1.34	NC	0.07	70	3	M93		0.24-0.3	10 ¹⁶	20	7	200
PES	1.37	NC	2.2	85	30	M88		0.27-0.32	10 ¹⁶	16	3-6	180
PEEK	1.30	NC	0.5	105	110	M99		0.2-0.25	10 ¹⁶	19	7	260
UHMPE	0.94	C		20-40	300-500		60-70	0.15-0.3	10 ¹⁷	90	20	80
NYLON 6	1.10-1.15	C	9-10	40-80	80-100	M80		0.22-0.26	10 ¹³	35	8	90
NYLON 66	1.10-1.15	C	7.5-9.5	40-85	60	M80		0.2-0.28	10 ¹⁴	30	7-10	90
NYLON 12	1.01-1.05	C	1.5-2	40-60	150-350	M82			10 ¹⁵	35	8-15	70
HDPE	0.945-0.963	C		19-35	300-500	M75-80	62-69	0.3-0.35	10 ¹⁷	60-90	15-20	80
ACETAL	1.40-1.42	C	0.8	70	30-80	M80		0.14-0.35	10 ¹⁶	20	11	85-145*

NC - Non-combustible SE - Self-extinguishing C - Combustible

Halar® registered trademark of Solvay
Vespa® registered trademark of DuPont

The above physical properties are typical values for comparative purposes only and do not represent a product specification. Properties will vary depending on the source of raw material, method of processing, physical form of the product or direction of measurement etc. The above properties must not be used for design purposes. For the correct properties in a specific application please refer to our Technical Department.

*Upper temperature dependent on application, please call for assistance.



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