

Materials Properties

PROPERTY	UNIT	SPECIFICATION (ASTM)	PTFE	PFA	FEP	PVDF
MECHANICAL						
Specific Gravity	gr/cm ³	D792	2.15	2.15	2.15	1.78
Tensile strength	Kg/ cm ²	D638 D1708	180-280	280	250	350
Coefficient of friction	Dynamic (<3m/min)	-	0.1	0.2	0.2	0.3
Compressive strength	Kg/ cm ²	D695	250	150	150	800
Elongation	%	D638 D1708	250-400	300	300	150
Hardness	Shore D	D2240	D 55-65	D 60-65	D 55-60	D 78
Tensile modulus	Kg/ cm ²	D638	5.600	2.800	3.500	15.000
ELECTRICAL						
Dielectric constant	-	D150	2.1	2.1	2.1	7.2
Dielectric strength	KV/mm	D149	>55	>75	>75	>40
Dielectric dissipation factor	-	D150(10 ³ Hz)	0.0002	0.0002	0.0001	0.03
Volume resistivity	Ohm/cm	D257	>10 ¹⁸	>10 ¹⁸	>10 ¹⁸	>10 ¹⁴
THERMAL						
Melting point	°C	-	+327	+310	+275	+170
Maxi. service temperature	°C	-	+260	+260	+205	+140
Mini. service temperature	°C	-	-60	-60	-60	-40
CHEMICAL						
Chemical resistance	-	-	Excellent	Excellent	Excellent	Good
Weather resistance	-	-	Excellent	Excellent	Excellent	Excellent
OTHER						
Aspect	-	-	White translucent	Transparent	Transparent	White opaque
Flammability	UL94	-	V-0	V-0	V-0	V-0
Limiting oxygen index	D2863	%	>95	>95	>95	40
Water absorption	%	D570	<0.01	<0.03	<0.01	<0.04

Temperature vs Workpressure

T1(A)B Smooth Hose

This table and the graph below give applicable working pressures according to the size of the hose and the liquid's temperature inside the hose. For liquid applications below 0°C, the maximum pressures apply up to -70°C. In all cases, we assume a constant ambient temperature of 20°C.



T1B	size	20°C	120°C	150°C	200°C	250°C
T1B004	4.9	276	276	193	97	24
T1B005	5.1	264	264	185	92	23
T1B006	6.7	224	224	157	78	20
T1B008	8.4	207	207	145	72	18
T1B010	10.3	183	183	128	64	16
T1B012	13.4	161	161	113	56	14
T1B016	16.6	114	114	80	40	10
T1B020	19.8	103	103	72	36	9
T1B022	22.1	92	92	64	32	8
T1B025	26.1	80	80	56	28	7

Temperature & Pressure Resistance Graph for T1B hoses

