

## Materials Properties

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



# Temperature vs Workpressure

## TCB1(A)E Convuluted 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.



TCB1E	size	20°C	120°C	150°C	200°C	250°C
TCB1E006	1/4"	172	172	120	60	15
TCB1E008	5/16"	138	138	97	48	12
TCB1E010	3/8"	138	138	97	48	12
TCB1E012	1/2"	103	103	72	36	9
TCB1E016	5/8"	83	83	58	29	7
TCB1E020	3/4"	69	69	48	24	6
TCB1E025	1"	46	46	32	16	4
TCB1E032	1 1/4"	34	34	24	12	3
TCB1E040	1 1/2"	30	30	21	11	3
TCB1E050	2"	23	23	16	8	2

Temperature & Pressure Resistance Graph for TCB1E hoses

