

TECHNOPOLYMERS



FLUORTEN[®]

This publication lists the characteristics of the technopolymers which Fluorten s.r.l. can and does transform with suitable equipment and modern technology.

As a result of detailed and careful research, Fluorten s.r.l. believes it has given the technicians interested one of the most complete guides available on the subject today.

The characteristic values for each material are listed in a single, easy-to-read brochure.

The most significant ones are then compared in clear comparative tables which make research for a precise choice of a technopolymer simple and easy.

After this initial research, it must be underlined that a further more detailed examination of the literature on the previously selected technopolymer and consultation with our technicians is necessary.

To facilitate identification, the international symbols have been used wherever possible.

Since the economic factor is also important when choosing a technopolymer, a significant parameter of the relative cost has been given for many of them in the brochure.

It should be noted, however, that for obvious reasons this parameter can become obsolete in time.

Finally, it is underlined that any discussion, however brief, on the technopolymers listed has purposely been left out.

Since this publication was thought out, studied and produced for technicians, it must be easy for them to read, using the figures which aim to give a precise comparative value.

For special materials, not mentioned here, like Vespel® (Du Pont de Nemours registered trade mark) and Rulon® (Saint-Gobain Performance Plastics Corporation) ask to our technical office.

TECHNOPOLYMER PROPERTIES AND CHARACTERISTICS

PROP.	N.	CHARACTERISTICS	CONDITIONS	ASTM METHOD REGULATIONS	UNIT
PHYSICAL	1	Density		D 792-50	$\text{g} \cdot \text{cm}^{-3}$
	2	Water absorption		D 570-59T	% weight
THERMAL	3	Melting point			$^{\circ}\text{C}$
	4	Heat resistance	In air		$^{\circ}\text{C}$
	5	Distortion temp.	1,81 MPa	D 648	$^{\circ}\text{C}$
	6	Distortion temp.	0,45 MPa	D 648	$^{\circ}\text{C}$
	7	Coeff. of linear expansion	from 23 to 100 $^{\circ}\text{C}$	D 696-70	$10^{-6} \cdot ^{\circ}\text{C}^{-1}$
	8	Coeff. of thermal conduct.		D 177	$\text{W} \cdot \text{m}^{-1} \cdot ^{\circ}\text{C}^{-1}$
	9	Average specific heat	from 10 to 80 $^{\circ}\text{C}$		$\text{Cal} \cdot ^{\circ}\text{C}^{-1} \cdot \text{g}^{-1}$
MECHANICAL	10	Tensile strength		D 638-52T ²³	MPa
	11	Ultimate elongation		D 638-52T ²³	%
	12	Coeff. of elongation elasticity		D 638-52T	MPa
	13	Compressive strength		D 695-54	MPa
	14	Coeff. of compressive elasticity		D 695-54	MPa
	15	Flexing resistance		D 790-59T	MPa
	16	Coeff. of flexing elasticity		D 790-59T ²³	MPa
	17	IZOD impact strength	with notch at 23 $^{\circ}\text{C}$	D 256-56	$\text{J} \cdot \text{m}^{-1}$
	18	IZOD impact strength	with notch at -40 $^{\circ}\text{C}$	D 256-56	$\text{J} \cdot \text{m}^{-1}$
	19	Tangential elasticity coeff.			MPa
	20	Hardness		D 2240-74	Shore
	21	Weight loss due to abrasion	1000 cycles 1000 g load CS 17 grinding wheel	D 1044	$\text{Kg} \cdot 10^{-6}$
	22	Wearing factor	In normal climate 23/50 Speed 6 $\text{m} \cdot \text{min}^{-1}$ Press 0.2 MPa		$10^{-8} \cdot \text{cm}^3 \cdot \text{min}^{-1} \cdot \text{hr}^{-1} \cdot \text{Kg}^{-1} \cdot \text{m}^{-1}$
	23	Coeff. of friction	On 38 HRC steel; Ra 0,4 μm		
ELECTRICAL	24	Volume resistivity	50% UR-23 $^{\circ}\text{C}$	D 257-57T	$\Omega \cdot \text{cm}$
	25	Dielectric constant	Δ 1 MHz	D 150-54T	
	26	Dissipation factor	Δ 1 MHz	D 150-54T	$10^{-4} \cdot \text{tg} \delta$
CHEMICAL	27	Inflammability	In atmosphere	D 635-68	
	28	Effect of solvents	to 23 $^{\circ}\text{C}$		
	29	Resistance to diluted acids	to 23 $^{\circ}\text{C}$		
	30	Resistance to concentrated acids	to 23 $^{\circ}\text{C}$		
	31	Resistance to diluted alkalis	to 23 $^{\circ}\text{C}$		
	32	Resistance to concentrated alkalis	to 23 $^{\circ}\text{C}$		
	33	Resist. to microbiological attack		D 1924	
VARIOUS	34	Resistance to radiations	In atmosphere ¹⁰		M rad.
	35	6.6 nylon base volume price index			

IDENTIFICATION SYMBOLS

FLUORINATED PLASTOMERS

PTFE	— Polytetrafluoroethylene
PTFE V-853	— Polytetrafluoroethylene glass filled
PTFE V-755	— Polytetrafluoroethylene glass filled
PTFE C-755	— Polytetrafluoroethylene carbographite filled
PTFE C-657	— Polytetrafluoroethylene carbographite filled
PTFE B-4012	— Polytetrafluoroethylene bronze filled
PTFE VG-7541	— Polytetrafluoroethylene glass + graphite filled
PTFE VM-8031	— Polytetrafluoroethylene glass + molybdenum disulphide filled
PTFE BM-57806	— Polytetrafluoroethylene bronze + molybdenum disulphide filled
PTFE G-853	— Polytetrafluoroethylene graphite filled

PFA	— Perfluoroalcoxi-(copol. of tetrafluoroethylene and perfluoropropyl vinyl ether)
FEP	— Copolymer tetrafluoroethylene-hexafluoropropylene
PCTFE	— Homopolymer polychlorotrifluoroethylene
ETFE	— Copolymer ethylen-trifluoroethylene
ETFE V-755	— Copolymer ethylen-trifluoroethylene glass filled
ETFE CF-706 Carbon F.	— Copolymer ethylen-trifluoroethylene carbon fibers filled
PVDF	— Polyvinylidene fluoride
ECTFE	— Ethylene-chlorotrifluoroethylene

PLASTOMERS

PA 6	— Polyamide 6
PA 6.6	— Polyamide 6.6
PA 11	— Polyamide 11
PA 6 V-706	— Polyamide 6 glass filled
PA 6.6 M-9902	— Polyamide 6.6 molybdenum disulphide filled
PA 6.6 V-706	— Polyamide 6.6 glass filled
PA 6.6 CF-608 Carbon F.	— Polyamide 6.6 carbon fibers filled
PA 11 V-706	— Polyamide 11 glass filled
PA 6.6 Min.	— Polyamide 6.6 mineral fillers
POM omp.	— Acetal homopolymer
POM cop.	— Acetal copolymer
POM cop. M-9902	— Acetal copolymer molybdenum disulphide filled
POM TFE-804	— Acetal copolymer PTFE filled
POM cop. V-755	— Acetal copolymer glass filled
PEHD	— High density polyethylene
PP o.&c.	— Polypropylene
PET	— Polyethyleneterephthalate
PBT	— Polybutyleneterephthalate
PTMT V-706	— Polytetramethyleneterephthalate glass filled
PC	— Polycarbonate
PC V-804	— Polycarbonate glass filled

PC CF-706 Carbon F.	— Polycarbonate carbon fibers filled
PPO mod.	— Polyphenyloxide
PPO mod. V-706	— Polyphenyloxide glass filled
PPS V-608	— Polyphenylsulphide glass filled
PPS CF-706 Carbon F.	— Polyphenylsulphide carbon fibers filled
PPSu-U	— Polysulphonal
PPSu-U-CF-706 Carbon F.	— Polysulphonal carbon fibers filled
PES	— Polyphenylethersulphide
PES V-706	— Polyphenylethersulphide glass filled
PES CF-706 Carbon F.	— Polyphenylethersulphide carbon fibers filled
PI	— Polyimides
PI G-755	— Polyimide graphite filled
PI TFE	— Polyimide PTFE filled
PEEK	— Polyethercheton
PEEK V-706	— Polyethercheton glass filled
PEEK CF-706	— Polyethercheton carbon fibers filled
PEI	— Polyetherimide
PA MX D6 V-5010	— Polyaramide

ELASTOMERS

PUR 80A	— 80 ShA hardness polyurethane	PETF 55D	— 55 ShD hardness polyester elastomer
PUR 90A	— 90 ShA hardness polyurethane	PETF 63D	— 63 ShD hardness polyester elastomer
PUR 55D	— 55 ShD hardness polyurethane	PETF 72D	— 72 ShD hardness polyester elastomer
PETF 92A	— 92 ShA hardness polyester elastomer		

CONVERSION FACTORS FROM S.I. UNITS TO PRACTICAL UNITS

CHARACTERISTICS	S.I. UNITS × CONVERSION FACTOR = PRACTICAL UNIT		
Coeff. of thermal conductivity	$W \cdot m^{-1} \cdot ^\circ C^{-1}$	$2.39 \cdot 10^{-3}$	$cal \cdot sec^{-1} \cdot cm \cdot cm^{-2} \cdot ^\circ C^{-1}$
Unit mechanical resistance	MPa	10.19	$Kg \cdot cm^{-2}$
IZOD impact strength	$J \cdot m^{-1}$	0.1019	$Kg \cdot cm \cdot cm^{-1}$

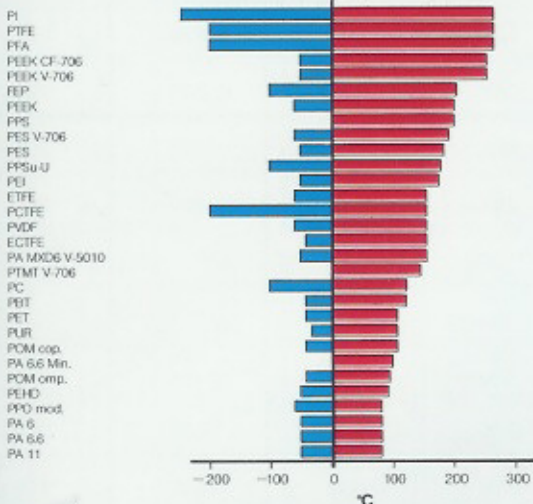
Notes:

- 1 - At 1% of deformation
- 2 - Deviation from 0.5%
- 3 - Expressed in mg 1000 cycles with 100 g load, CS 17 grinding wheel
- 4 - From 50 Hz to 1 MHz
- 5 - From 100 Hz to 1 MHz
- 6 - Softens. Gels
- 7 - Only in high polar solvents
- 8 - Only in polar and high polar solvents
- 9 - 1st value: test tube conditioned at 50% U.F.L. - 2nd value: at 0.2% U.F.L.
- 10 - Obtained with Charpy pendulum
- 11 - Varies very little with frequency variation
- 12 - 1st value: dry - 2nd value: conditioned in normal climate 23/50

- 13 - From 10^2 Hz to 10^5 Hz
- 14 - At 300% of elongation
- 15 - Only soluble in chlorinated and aromatics
- 16 - IZOD impact strength at $-4^\circ C$
- 17 - H 22 grinding wheel
- 18 - Tolerance limit dose
- 19 - Only soluble hot in high polar solvents
- 20 - Only soluble in ethers and chlorinated
- 21 - Corroded by oxidizing acids
- 22 - Only soluble in apolar solvents
- 23 - ASTM D412 regulation for elastomers
- 24 - At 10% of deformation

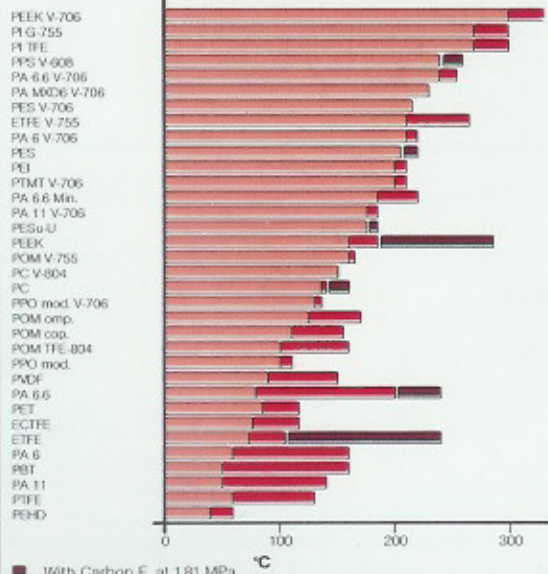
COMPARISON TABLES

RESISTANCE TO CONTINUOUS HEAT

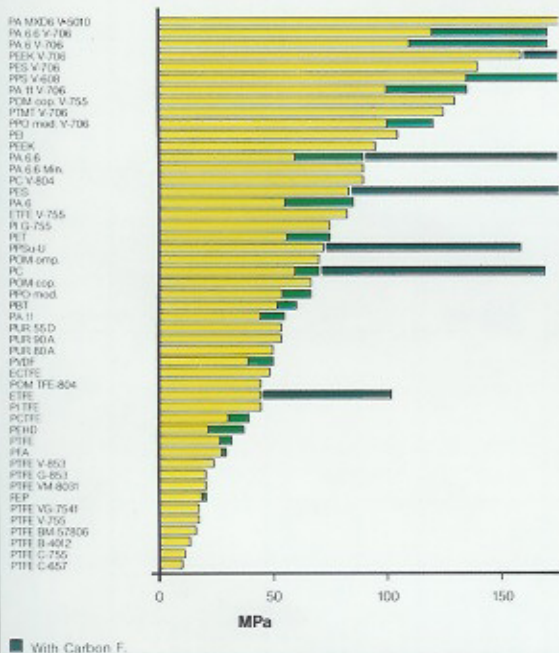


N.B. - The negative values are intended as brittling temperatures.

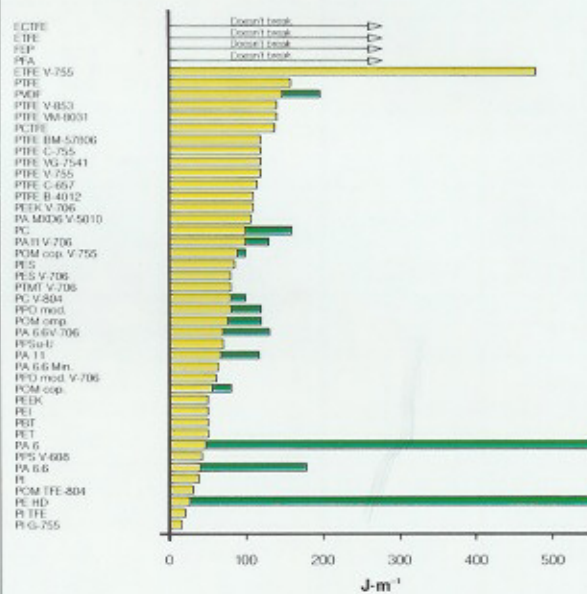
DISTORTION TEMPERATURE TO 1.81 AND 0.45 MPa - ASTM D 648



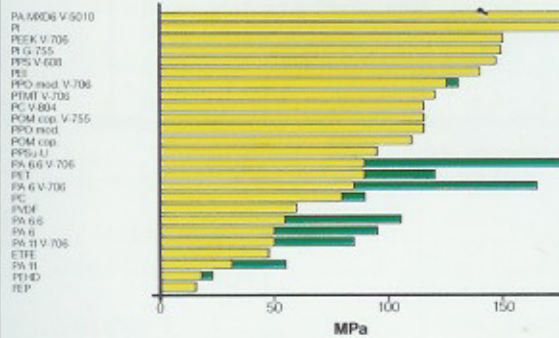
TENSILE STRENGTH - ASTM D 638-52T



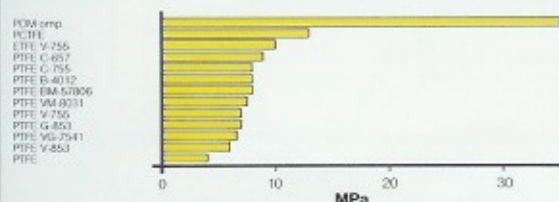
IZOD IMPACT STRENGTH AT 23 °C - ASTM D 256-56



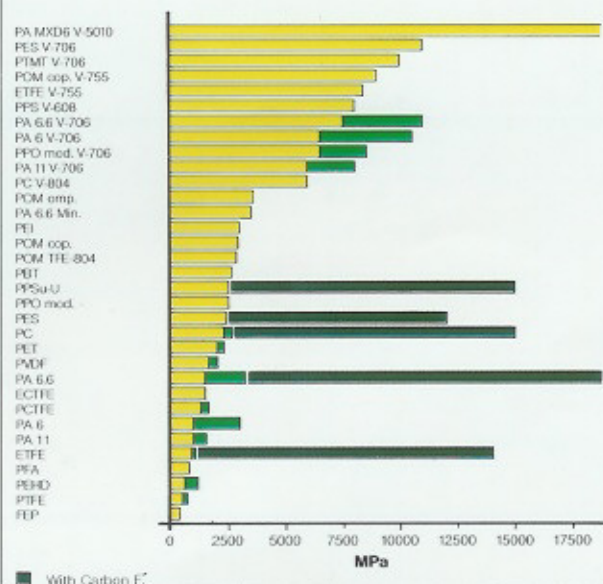
COMPRESSIVE STRENGTH - ASTM D 695-54



COMPRESSIVE STRENGTH AT 1% OF DEFORMATION



COEFF. OF ELONGATION ELASTICITY - ASTM D 638-52T



FLUORINATED PLASTOMERS

N.	PTFE	PTFE V-853	PTFE V-755	PTFE C-755	PTFE C-657	PTFE B-4012	PTFE VG-7541	PTFE VM-8031	PTFE BM-57806
1	2.13+2.20	2.21	2.24	2.07	2.04	3.74	2.18	2.28	3.2
2	< 0.01	0.015	0.013	0.00	0.00	0.02	0.016	0.01	0.01
3	327 ⁶	327 ⁶	327 ⁶	327	327 ⁶	327 ⁶	327 ⁶	327 ⁶	327 ⁶
4	260	260	260	260	260	260	260	260	260
5	50+60								
6	130+140								
7	Trans.100+120 Axial	52 144	76 126	75 90	70 85	79 97	47 139	63 150	85 110
8	0.25	0.37	0.46	0.44	0.62	0.48	0.37	0.33	0.60
9	0.25	0.24	0.22	0.23	0.22	0.15	0.22	0.22	0.20
10	25+35	15	14	12.5	11	12		20	16
11	200+400	200	150	100	50	150	250	250	170
12	400+650								
13	Trans. Axial 4.4 ¹	6 7 ¹	7.8 8.4 ¹	8.4 10.5 ¹	9.5 12 ¹	8.2 7.8 ¹	6.8 7 ¹	7.7 7.9 ¹	8 7.2 ¹
14	Trans. Axial 420	600 690	700 830	840 1050	950 1160	800 770	640 670	830 770	640 770
15	Trans. 5.7 ²	4 ²	4.2 ²	9.7 ²	7 ²	8 ²	5.4 ²	8.4 ²	6.5 ²
16	350+630	2280	1670	1190	1300	1380	1950	1690	1120
17	157	140	120	120	115	110	120	140	120
18	118								
19	270								
20	D 51	D 54	D 57	D 66	D 66	D 67	D 56	D 57	D 58
21	8.9 ³								
22	~ 3000	16+19	12+15	14	12	7	18	18	7
23	Stat. 0.16 Dinam. 0.12	0.22 0.14	0.18 0.16	0.11 0.22	0.13 0.26	0.18 0.14	0.18 0.16	0.16 0.14	0.18 0.12
24	> 10 ¹⁸	10 ¹³	10 ¹³	/	/	Low	10 ¹³	10 ¹⁴	Low
25	2 ⁴	2.35	2.85	/	/	/	3.25	2.68	/
26	< 2	29	28	/	/	/	24	61	/
27	Doesn't burn								
28	None								
29	Excellent					Doesn't resist	Excellent	Doesn't resist	
30	Excellent					Doesn't resist	Excellent	Doesn't resist	
31	Excellent					Doesn't resist	Excellent		Doesn't resist
32	Excellent					Doesn't resist	Excellent		Doesn't resist
33	Excellent								
34	0.015 ÷ 0.03								
35	6.2	7	6.5			12	6.5	7	10

FLUORINATED PLASTOMERS

N.	PTFE G-853	PFA	FEP	PCTFE	ETFE	ETFE V-755	ETFE CF-706 Carbon Fibers	PVDF	ECTFE
1	2.16	2.12+2.17	2.14+2.17	2.10+2.12	1.7+1.77	1.86	1.75	1.77	1.69
2	0.00	0.03	< 0.01	0.00	< 0.02	0.02	0.015	0.03	0.01
3	327 ⁶	300+310	285+295	270+310	270	270	270	171	245
4	260	260+285	205	150	150+180	180	180	150	150
5				75	74	210	240	90	77
6			70	129	104	265		149	116
7	Trans. 79 Axial 126	121	94	60+85	90+130	20	14	10	80
8	0.45	0.27	0.25	0.19+0.26	~ 0.23	~ 0.37	0.81	0.12	0.14
9	0.21		0.28	0.22	0.5	0.44		0.33	
10	18	28+30	19+21	32+40	44.6	82.5	103	40+50	49
11	250	300	250+350	125+175	150+250	9	2+3	50+300	200
12		700	350	1350+1570	825+1000	8250	~ 14000	1500+2000	1400
13	7.3 ¹		15.5 ¹	~ 14 ¹	49	10 ¹		60	
14			400	1240				870	
15	6 ²		20	60+67	28		58	55	50
16		670		1300+1670	1370	6520	11400		
17		Doesn't break		137	Doesn't break	480		147+196	Resist
18					> 1100	380		Fragile	
19					500+600				
20	D 61	D 60	D 59	D 74+78	D 67+75			D 77+82	
21			7.5 ³	11+13					
22	60			2400	660	1.8	1.6		
23	Stat. Dinam.			0.3	0.4	0.3 0.3	0.24 0.22	0.48	
24	10 ⁴	> 10 ¹⁸	> 2·10 ¹⁸	2.5+4·10 ¹⁶	10 ¹⁶	10 ¹⁶	Low	10 ¹⁵	> 10 ¹⁵
25	/	2.1 ⁴	2.2 ⁴	2.4	2.6 ⁵	3.4 ⁵	/	7.25	2.3
26	/	2+3	2+8 ⁴	70	50	45	/	400+1800 ⁴	5+15 ⁴
27	Doesn't burn						Self-extinguish.	Doesn't burn	
28	None			Expands	None			Soluble ⁸	None
29	Excellent							Excellent Good	Excellent
30	Excellent							Good Fair	Excellent
31	Excellent							Good	Excellent
32	Excellent							Good	Excellent
33	Excellent								
34	0.015 + 0.03		2 + 5	1 + 15	Low			100 + 500	
35	7	24	15	39	14	17		6.5	

PLASTOMERS

N.	PA 6	PA 6.6	PA 11	PA 6 V-706	PA 6.6 M-9902	PA 6.6 V-706	PA 6.6 CF-608 Carbon Fibers	PA 11 V-706	PA 6.6 Min.	POM omp.	POM cop.	
1	1.11+1.14	1.12+1.15	1.01+1.04	1.35	1.13	1.35	1.34	1.26	1.48	1.42	1.41	
2	2.5+4	2.5+3	0.7+0.9	1.00+1.50	2.5+3	0.75+1	0.5	0.1+0.2		0.25	0.22	
3	220	255	180	220	255	255	255	180	256	175	163	
4	80+120	80+120	80+120	90+150	80+120	80+150	110	90+140	~ 100	95	105	
5	60+80	80+120	50+60	210	80+120	240	240	175	185	124	110	
6	160+180	200+220	140+150	218	200+220	255		183	220	170	157	
7	80+120	80+120	120+180	20+25	80+120	15+25	14	60+80		90	80+110	
8	0.23	0.23	0.23	0.23	0.24	0.21	1.22	0.19		0.22	0.22	
9	0.4	0.4	0.3	0.4	0.4	0.3		0.3		0.35	0.35	
10	55+85 ⁹	60+90 ⁹	45+55 ⁹	110+170 ⁹	65+90 ⁹	120+170 ⁹	276	100+135 ⁹	90	70	67	
11	300+30 ⁹	250+20 ⁹	300+90 ⁹	< 5 ⁹	70+20 ⁹	< 5 ⁹	3+4	< 5 ⁹	14	25+75	40+75	
12	1000+3000 ⁹	1400+3200 ⁹	1000+1500 ⁹	6500+10500 ⁹	1600+3400 ⁹	7500+11000 ⁹	~ 20000	6000+8000 ⁹	3400	3600	2870	
13	50+95 ⁹	55+105 ⁹	32+55 ⁹	85+165 ⁹	60+110 ⁹	90+180 ⁹		50+85 ⁹		37 ¹	110	
14				4500+8000 ⁹		6000+8500 ⁹				4700	3150	
15	45+120 ⁹	65+130 ⁹	45+75 ⁹	125+230 ⁹	65+130 ⁹	170+250 ⁹	413	120+180 ⁹		98	91	
16	1000+2800 ⁹	1300+3000 ⁹	800+1400 ⁹	4000+8000 ⁹	1350+3100 ⁹	6500+9500 ⁹	23400	3500+6500 ⁹	5500	2800	2640	
17	590+49 ⁹	177+39 ⁹	118+69 ⁹	160+80 ⁹	177+39 ⁹	130+70 ⁹		130+100 ⁹	64	76+120	55+80	
18	Doesn't break ¹⁰									65+100		
19										1265		
20											D 85	
21	3+6	5+8	4+9	28+31	5+7.5	32+36		35+40		20	18	
22	350+900	300+900		200+900	120+200	200+900	~ 40			390+900	450+900	
23	Stat. Dinam. 0.24	0.35		0.35	0.32	0.35	0.13 0.18			0.31	0.3+0.4	
24	10 ¹¹	10 ¹²	10 ¹³	10 ¹²	10 ¹³	10 ¹³	Low	10 ¹³		> 10 ¹⁶	> 10 ¹⁴	
25	3+4 ¹¹	3+4 ¹¹	3+4 ¹¹	3.5+4,5 ¹¹	3.5 ¹¹	3.5+4 ¹¹	/	3+3.5 ¹³		3.7	3.7	
26	300+3000 ¹²	200+2000 ¹²	300+600 ¹²	200+1200	180	200+1000	/	400+800		20+50 ⁴	60	
27	Self-extinguishing									Burns		
28	None									Soluble ¹⁵		
29	Doesn't resist	Weak	Doesn't resist			Weak		Doesn't resist	Weak	Modest		
30	Doesn't resist											
31	Excellent											
32	Resist									Weak		
33	Excellent											
34	0.5+2.5	1+10		0.5+2.5	1+10						0.9+0.4	
35	0.8	1		1.2	1.1	1.3				1.3	1.2	

PLASTOMERS

N.	POM cop. M-9902	POM TFE-804	POM cop. V-755	PEHD	PP o.&c.	PET	PBT	PTMT V-706	PC	PC V-804	PC CF-706 Carbon Fibers
1	1.42	1.54	1.6	≥ 0.94	0.90	1.34	1.31	1.52	1.2	1.35	1.33
2	0.22	0.2	0.2	< 0.01	0.01+0.03	0.08	< 0.1	0.35	0.15	0.16	0.04
3	163	175	163	130+135	165+170	250+260	225	~ 225	220+230	220+230	220+230
4	105	90	105	90+110	105+120	105+120	120	140	120	135	125
5	105	100	160	40+55	65+70	85	50+70	> 200	135	147	158
6	152	160	162	60+85	140	115	160+170	> 210	140	150	
7	110	75	31	200	58+100	80	60+90	45	60+70	30	~ 15
8	0.22		0.41	0.46+0.52	0.13	0.24	0.25		0.2	0.21	~ 0.7
9	0.35		0.35	0.55	0.5	0.35	0.24		0.29	0.32	
10	65	45	130	22+38	28+40	56+75	52+60	125	60+68	90	168
11	40+70	7	3	450	50+150	50+300	> 200	< 2	80+120	3+4	2+7
12	2800	2750	9000	420+1250	700+1500	2000+2200	2600	10000	2200+2600	6000	~ 15000
13			115	19+25	25+56	90+120		120	80+90	115	
14					1000+2000				2200+2500	8000	
15	93	70	196		35+56	80+110	85	190	85+100	145	248
16	2700	2450	7700	700+2000	1200+1700	2400+2800			2100+2400	5600	13300
17	40+60	30	90+100	25+900	50+800		50	80	100+160	80+100	
18							Doesn't break				
19											
20	D 85					D 84					
21					18+28	4+6		15	10+12	17	
22	300			24+420		54+900			~ 5000		~ 200
23	* Stat. Din. 0.3+0.4	0.26		0.25		0.24			0.31 0.38		0.19 0.16
24	> 10 ¹⁴		10 ¹⁴	7.5-10 ¹⁶	> 10 ¹⁶	10 ¹⁶	10 ¹⁶	10 ¹⁶	10 ¹⁶	10 ¹⁵	Low
25	3.9		3.9	2.3+2.35	2.2+2.6	3.3	7	3.4	2.8+3	3.13	/
26			62	2.5	5+20	20+40	3000	190	100+200	100+200	/
27	Burns						Self-extinguishing				
28	Soluble		Soluble	Soluble	Soluble	Soluble	None		Soluble		
29	Modest		Excellent		Resist		Poor		Good		
30	Doesn't resist		Resist	Modest			Doesn't resist				
31	Excellent				Doesn't resist		Excellent		Doesn't resist		
32	Weak		Excellent		Doesn't resist		Excellent		Doesn't resist		
33	Excellent										
34	0.9+0.4	< 1	1+10	20+80	2.5+10	15+200			2.5+30		
35	1.4	3.7		0.7	0.5				1.3	1.5	

PLASTOMERS

[illegible]

PLASTOMERS						ELASTOMERS						
N.	PEEK	PEEK V-706	PEEK CF-706	PEI	PAMX D6 V-5010	PUR 80A	PUR 90A	PUR 55D	PETF 92A	PETF 55D	PETF 63D	PETF 72D
1	1,32	1,49	1,44	1,27	1,64	1,2	1,2	1,2	1,17	1,20	1,22	1,25
2	0,15	0,15	0,15	0,25	0,17	< 1,5	< 1,5	< 1,5	0,6			0,3
3	340	340	340	340+400	275	215	220	225	168			218
4	200	250	250	170	150+220	~105	~105	~105	~120	~120	~120	~120
5	160	>300	>283	200	230							
6	182	>300		210								
7	70	32	24	56	11	150	180	130				
8	0,25	0,36	1,02	0,22	0,55	~0,29	~0,29	~0,29				
9	0,32											
10	95	158	197	105	255	50 ²³	54 ²³	54 ²³	41,5 ²³	45 ²³	41 ²³	42
11	70	4	2	60	1,9	500+550 ²³	450+550 ²³	450+550 ²³	800 ²³	700 ²³	500 ²³	395
12				3000	20000	~2,6 ²⁴	~8 ²⁴	~8 ²⁴	~32 ²⁴	~110 ²⁴	~140 ²⁴	
13	110	150	180	140	230							
14						2,5 ⁷	5 ⁷	8,2 ⁷				
15	120	210	300	145	340							
16	3500	8500	16000	3300	17700				~50	210	350	530
17				50	17	Doesn't break			~1000	~1000	~1000	
18						Doesn't break ¹⁶	/	27+135	~1000 ¹⁶	~1000 ¹⁶	~60 ¹⁶	~45
19												
20						A 80	A 90	D 55	A 92	D 55	D 63	D 72
21				10		≤20 ¹⁷	≤10 ¹⁷	≤80 ¹⁷	3	5	8	
22												
23			0,19 0,13									
24	10 ¹⁶	10 ¹⁶	10 ³	6,7 · 10 ¹⁵		10 ¹³	4 · 10 ¹³	3 · 10 ¹²				
25	3	3,61		3,15	4,2	5,09	4,3	4,39				
26		0,0043		0,0013	0,009	1000	600	610				
27	Self-extinguishing					Self-extinguishing			Burns			
28	Excellent			Good	None	Soluble ⁸						Soluble
29	Excellent			Good	Doesn't resist	Doesn't resist						
30	Doesn't resist			Fair	Doesn't resist	Doesn't resist						
31	Good				Excellent	/			Good			
32	Good			Resist		/			Modest			
33	Excellent					Sufficient						
34	1000			500		5+25			~10			/
35						1,3			4			



▲ LABORATORY
▼ MOULDING DEPARTMENT



▲ INJECTION MOULDING
▼ MECHANICAL WORKING DEPARTMENT



FLUORTEN® is not just the name of our company, founded in 1966, but also the trademark of our high quality products. The company started with fluoropolymers and gradually expanded to an increasingly wide range of technical items in high quality technopolymers. This evolution continues to involve considerable investments and the appointment of highly qualified technical staff. We have built up a production plant with extremely modern extrusion, moulding and mechanical processing departments. Today we can offer our customers high quality special products together with a technical and commercial service to meet all requirements. Company development continues along two basic lines: constant modernization and continuously improved quality.

Although the data, information and suggestions given correspond to our best knowledge, they are simply informative and Fluorten s.r.l. takes no responsibility for any results which may arise from their use, or for any existing patent infringements.



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