

Properties plastics, extrusion

	Thermoplastic Polymers									Thermoplastic Elastomers		
	Polyolefines			Polyamides			POM	PET/PBT	PC	TPE-U	TPE-A	TPE-E
	LDPE	HDPE	PP	PA6	PA11	PA12						
Tensile strength in Mpa		25 - 45	20 - 460	35 - 80	40 - 90	38 - 60	40 - 70	30 - 50	70	25 - 70	30 - 62	14 - 45
Elongation in %	350 - 700	50 - 1000	10 - 500	40 - 300	30 - 400	50 - 400	10 - 200	20 - 350	50 - 120	160 - 750	50 - 700	200 - 800
Bending modulus in Mpa	100 - 600	500 - 1500	900 - 2000	500 - 2900	400 - 1400	260 - 1600	1400 - 3000	1000 - 2400	2300	70 - 2300	15 - 730	40 - 1200
Hardness in Shore D	49 - 55	58 - 65	72 - 81	70	72	72	85	55 - 65	90	40 - 75	25 - 72	35 - 80
Specific gravity (gr/cm ³)	0,91 - 0,94	0,94 - 0,96	0,90 - 0,91	1,03 - 1,17	1,0 - 1,05	1,0 - 1,17	1,3 - 1,4	1,2 - 1,3	1,20	1,05 - 1,20	0,96 - 1,10	1,12 - 1,27
Coefficient of friction	0,60	0,28	0,30	0,40	0,35	0,35	0,30	0,22 / 0,50	0,55	0,2 - 0,8		
Clarity	****	***	***	**	***	***	*	*****	*****	****	****	**
Melting point in °C	110	125	134 - 165	220	175 - 190	170 - 185	160 - 175	230/250	240	170 - 240	135 - 175	160 - 215
Min. working temperature	-30	-20	-10	-40	-50	-50	-40	-40	-40	-50	-40	-40
Max. working temperature	80	100	120	150	100	100	100	140	120	80	130	130
Water absorption	0,01	0,01	0,01		0,2 - 2,0	0,2 - 1,6	0,2 - 1,0	0,1 - 0,5	0,3	0,1 - 0,4	0,9 - 1,2	0,6 - 2,5
Chem. Resistance	***	***	****	**	**	**	***	****	*	***	***	***
Sterilisation:												
ETO	x	x	x	x	x	x	x	x	x	x	x	x
Steam	-	-	x	x	x	x	x	-	-	-	x	x
Radiation	x	x	(x)	x	x	x	(x)	x	x	x	x	x

*****	Excellent
****	Good
***	Tolerable
**	Moderate
*	Poor

Actual properties may change due to processing method, compound type, extruded dimensions and other variables.
It is the user's responsibility to evaluate and cully test the suitability of the product for their specific application