

## Comparison between the properties of transparent plastics

MATERIAL CHARACTERISTICS	METHOD	UNITS	PMMA	PC	PETG	PET	PS	SAN
<b>PHYSICAL</b>								
Density	ISO 1183	g.cm-3	1,2	1,2	1,27	1,34	1,05	1,08
<b>MECHANICAL</b>								
Tensile Strength @ Yield	ISO 527	Mpa	(*)	60	53	59	(*)	(*)
Tensile Strength @ Break	ISO 527	Mpa	83		26	No break	59	67
Elongation @ Break	ISO 527	%	5	72	>200	No break	3	2,5
Tensile Modulus of Elasticity	ISO 527	Mpa	3200	2300	2200	2420	3250	3700
Flexural Strength	ISO 178	Mpa	120	97	79	86	106	97
Charpy Notched Impact Strength	ISO 179	kJ/m2	(*)	55	10	(*)	1,47	1,28
Charpy Unnotched	ISO 179	kJ/m2	20		No break	No break	16	17
Rockwell Hardness M / R scale			92 / (*)	72 / 118	(*) / 115	(*) / 111		83 / (*)
Ball Indentation	ISO 2039	Mpa	185		(*)	117	150	165
<b>OPTICAL</b>								
Light Transmission		%	92	87-91	88	89	89	86
Refractive Index			1,489	1,586	1,57	1,576	1,591	1,561
<b>THERMAL</b>								
Max. service temperature		oC	80	120	65	60	80	85
Vicat Softening Point - 10N	ISO 306	oC	116		83	79	106	108
Vicat Softening Point - 50N	ISO 306	oC	107	151	78	75	101	105
HDT A @ 1.8 Mpa	ISO 75-1,2	oC	97	143	68	69	86	98
HDT B @ 0.45 Mpa	ISO 75-1,2	oC	101	146	72	73	98	101
Coefficient of Linear Thermal Expansion x10-5		x10-5. oC-1	7	68	6,8	<6	8	7
Flammability, France	NPF 92-507		M4		M2	M2	M4	M4
Flammability, Germany	DIN 4102-1		B2		B1	B1	(*)	B2
Flammability, UK	BS 476: Part 7		2		1Y	1Y	(*)	(*)

(\*) not aviable

The information contained in this document is based on our present state of knowledge and is intended to provide general information about our products. It should not be construed as any guarantee of specific properties of the products described or their suitability for a particular application.