

## MECHANICAL PROPERTIES

### CAST ACRYLIC TUBE - CLEAR

PROPERTY	NORM	UNIT	VALUES
<b>MECHANICAL PROPERTIES</b>			
specific weight	DIN 53479	gr/cm <sup>3</sup>	1,19
water absorption	DIN 53495	%	0,21
flexural strength	D790	Kg/cm <sup>2</sup>	1200
tensile strength at break	D638	Kg/cm <sup>2</sup>	700
Modulus of elasticity	D790	Kg/cm <sup>2</sup>	32000
Elongation at break	DIN 53455	%	3
notch impact resistance	DIN 53453	kJ/m <sup>2</sup>	2.2
impact strength	DIN 53453	kJ/m <sup>2</sup>	25
ball indentation hardness (Rockwell)	DIN 53456	MPa	100
<b>THERMAL – ELECTRIC PROPERTIES</b>			
service temperature (without mech. stress)	-	°C	-20; +60
Softening temperature (Vicat)	DIN 53460	°C	107
Coefficient of linear thermal expansion	DIN 53752	mm/m.°C	0,8
thermal conductivity at 20°C	DIN 52612	W/(m*K)	0,19
Inflammability (propagation speed)	D 635	cm/min	3
Dielectric constant at 1 MHz	DIN 53483	-	2,9
Dielectric loss factor at 1 MHz	DIN 53483	-	0,035
dielectric strength	DIN 53481	Kv/mm	35
<b>OPTICAL PROPERTIES</b>			
index of refraction	D 542	-	1,49
light transmittance	D 1003	%	92,3
average spectral transmittance:	D 307	%	70
-ultraviolet 250-380 mμ	D 307	%	92
-visible 380-720 mμ	D 307	%	87
-infra-red 720-1200 mμ			
turbidity (Haze)	D1003	%	0,3
light absorption	-	%	< 0,05
limit angle	D 542	°	42

The data contained in this table represent mean values taken from DIN and ASTM norm systems. The values are for standard parts under standard conditions. All data is given as guidance only and should not be applied without reservation. theplasticshop.co.uk accepts no responsibility whatsoever for results or application due to their use, or which is in opposition to existing patents.