



**MATERIAL PROPERTIES**

TYPICAL PROPERTIES OF MARCRYL RESINS					
	TEST METHOD			VALUE	UNIT
	DIN	ASTM	ISO		
<b>PHYSICAL</b>					
Density	53479	D 792	R 1183	1.19	g/cm <sup>3</sup>
Water absorption	53495: A		62	0.3	mg
<b>OPTICAL</b>					
Transmittance (3mm thick material in the visible range)	5036 Part 3			92	%
Haze		D 1003		0.5	%
Refractive index (n <sub>D</sub> )			489	1.491	
<b>THERMAL</b>					
Heat distortion temperatures Method B (0.45 MPa)	53461	D 648	75	95	°C
Heat distortion temperatures Method A (1.81 MPa)	53461	D 648	75	90	°C
Specific heat				1.47	J/kg.K
Thermal conductivity	52612	C 177		0.19	W/K.m
Coefficient of thermal expansion	53752-A			0.07	mm/m°C
Vicat softening point (B/50)	53460		306	102	°C
<b>MECHANICAL</b>					
Tensile strength a) -40°C	53455	D 638	R 527	100	MPa
Tensile strength b) 23°C	53455	D 638	R 527	72	MPa
Tensile strength b) 70°C	53455	D 638	R 527	35	MPa
Elongation at break	53455	D 638	R 527	4.5	%
Flexural strength	53452	D 790	178	105	MPa
Flexural Modulus			178	3200	MPa
Compressive yield stress	53454	D 695	R 604	103	MPa
Izod Impact strength, standard			180	1.6	kJ/m <sup>2</sup>
Charpy unnotched impact strength, 23°C			179-1/1eU	20	kJ/m <sup>2</sup>
Ball indentation hardness (H961/30)			2039/2	175	MPa
Taber abrasion resistance (100rev.;5.4N;CS-10F)			9352	20-30	% haze
<b>ELECTRICAL</b>					
Volume resistivity	VDE 0303 pt 3		IEC 93	>10 <sup>15</sup>	Ω/cm
Dissipation constant at 50 Hz	VDE 0303 pt 4		IEC 250	0.06	
Dissipation constant at 0.1 kHz	VDE 0303 pt 4		IEC 250	0.04	
Surface resistivity	VDE 0303 pt 3		IEC 93	>10 <sup>14</sup>	Ω
Tracking CTI, 2 mm	VDE 0303 pt 1		IEC 112	KC>600	

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