MECHANICAL PROPERTIES

ALT/CBRSB/(PE,PV)/1
CLEAR CAST SHEET, BLOCK, ROUND ROD & SQUARE BAR

ALT CAST acrylic is a thermoplastic polymer obtained by mass polymerisation of pure monomer and is distinguished by its extreme PURITY and TRANSPARENCY together with:

- EXCELLENT MECHANICAL MACHINING
- EASY THERMOFORMING
- BRILLIANCY AND VARIETY OF COLOURS
- LIGHTNESS AND TOUGHNESS
- EXCELLENT RESISTANCE TO LIGHT AND AGEING.

SPECIFICATIONS OF ALT CAST Acrylic

The proprieties according to the methods used refer to tests done on clear sheets having a 3mm thickness at temperature of 23ºC and 50% R.H.

PROPERTIES	ASTM METHOD	UNIT		DIN METHOD	UNIT	
DENSITY (SPECIFIC WEIGHT)	1.19	g/cm2	D792	1.19	g/cm2	53479
WATER ABSORPTION	0.25	%	D570	25	mg	53495
MODULUS OF ELASTICITY	32000	Kg/cm2	D790	3200	N/mm2	53455
TENSILE STRENGTH	740	Kg/cm2	D638	74	N/mm2	53452
FLEXURAL STRENGTH	1200	Kg/cm2	D790	120	N/mm2	53455
ELONGATION AT BREAK	3	%	D638	3	%	53453
IMPACT STRENGTH WITH NOTCH (IZOI	2	Kg cm/cm2	D256	2	KJ/m2	53453
IMPACT STRENGTH UNNOTCHED (CHARPY)	25	Kg cm/cm2	D256	27	Kg/m2	53453
ROCKWELL HARDNESS	M100	-	D785	-	-	-
BALL DROP H98/30	-	-	-	200	N/mm2	53453
COEF. OF THERMAL CONDUCTIVITY	5.104	cal/cm/sºC	C177	0.19	W/mºC	52612
DEFLECTION TEMP. (1.8N/mm2)	105	ºC	D648	105	ºC	53461
SOFTENING POINT	>=115	ºC	D1525	>=115	ºC	53460
COEF. OF LINEAR THERMAL EXPANSION	7,5.10-5	1/ºC	D696	70.10-4	1/ºC	VDE0304/1
SPECIFIC HEAT	0.35	cal/gºC	-	-	-	-
REFRACTIVE INDEX n20/D	1.49	-	D542	1.49	-	53491
LIGHT TRANSMITTANCE	92	%	D1003/A	92	%	5036
HAZE	0.5	%	D1003/A	-	-	-
DIELECTRIC STRENGTH	20	KV/mm	D149	20	KV/mm	53481
VOLUME RESISTIVITY	1015	Ohm/cm	D257	-	-	-
SURFACE RESISTIVITY	1414	Ohm	D257	1014	Ohm	53482
TRANSVERSAL RESISTIVITY	>1015	Ohm/cm	D257	>1015	Ohm/cm	53482
DIELECTRIC CONSTANT (50Hz)	3.5	-	D150	3.5	-	53483
POWER FACTOR (50Hz)	0.05	-	D150	0.06	-	53483

RESISTANCE TO CHEMICAL AGENTS ACIDS, BASES AND INORGANIC SALT. Please enquire.

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