LUXACRYL® Technical Data Sheet

LUXACRYL® is ttv's precision cast acrylic (PMMA) for applications with requirements of excellent optical quality. Special production: one side non-glare coating and/or both surfaces with hard coating, conductive or optical AR coatings with Anti-Finger-Print surface.

Applications: mainly used as windows for any type electronic display (LED, VFD, LCD, etc.) or for model making.

Sheet size: Standard: 850 x 850 mm; thicknesses from 0.2 through 6.0 mm (clear **LUXACRYL** also available in bigger sizes), thickness tolerance ± 0.1 mm (up to thickness 3.0 mm). ttv also supplies cut to size or machined to customer's drawings (including silk screen printing and adhesive).

TECHNICAL DATA	TEST METHOD	UNIT	VALUE*
PHYSICAL			
Density	ASTM D-792	g/cm³	1.19
Pencil Hardness	ASTM D-3363		approx. 2 – 3H
Water Absorption	ASTM D-570	%	0.3
OPTICAL			
Transmission	ASTM D-1003	%	approx. 92
Reflective Index	ASTM D-542	u 20/D	1.49
THERMAL			
Vicat Softening Temperature	ISO 306	℃	98 – 102
Max. Continuous Temperature		℃	80
Heat Distortion Temperature	ASTM D-648	℃	100
Coeff. of Thermal Expansion	ASTM D-696	1/℃	$7x10^{-5}$
Coeff. of Thermal Conductivity	DIN 52612	W/mK	0.16
MECHANICAL			
Rupture strength (tensile)	ASTM D-638	kg/cm^2	750
Rupture strength (flexural)	ASTM D-790	kg/cm^2	1300
Elongation	ASTM D-638	%	5
E-Module	ISO 527-2/1B/1	MPa	3300
Impact strength	ISO 180/1 A	kJ/m^2	1.6

CHEMICAL RESISTANCE ***"+" = no change, "x" = conditionally resistant, "-" = not resistant***

- Acetone	- Alcohol (96%)	+ Dilute Alcohol (50%)	- Amine
- Aniline	x Ether	- Aromatic Hydrocarbon	+ Ethylene glycol
+ Benzine	- Benzene	x Bromine Vapors	x Chlorine Vapors
- Chlorinated Hydrocarbon	- Ester	x Fluorine Vapors	x Formaldehyde (10-40%)
+ Glycerine	+ Factory fume	+ Hexane	- Ketones
- Paint thinner	+ Lanolin	+ Bases (10%)	x Bases (20%)
+ Methylamine	+ Mineral Oil	+ Chlorinated Paraffin	+ Petroleum Ether
- Phenole	+ Salt Solutions	+ Acids (20%)	- Carbon Tetrachloride
- Fuel mixture	+ Water	+ Xylene	

** Values provided cannot be guaranteed in your application due to circumstances beyond our control.*

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