

# Technical Data Sheet

## Acrylic

### Advantages

- Half the weight of glass yet equal to it in clarity and up to 17x more impact resistant
- Exceptional weathering characteristics
- Excellent insulator
- Excellent resistance to Mineral Oils
- Good resistance to Dilute Acids, Aldehydes and Aliphatic Hydrocarbons
- Limited resistance to Bases
- Poor resistance (not recommended for use) with Concentrated Acids, Alcohols, Esters, Aromatic and Halogenated Hydrocarbons, Ketones, Vegetable Oils and Oxidizing Agents.
- Machine-able and heat-bendable
- Acrylic can be solvent bonded
- Extruded acrylic can be flame polished to obtain a glass-like finish

	Test Standard	Units	Guide Values
<b>General</b>			
Relative Density	ISO 1183	g/cm <sup>3</sup>	1.19
Water Absorption	ISO 62	%	0.2
Light Transmission	ASTM D-1003	%	>92
Refractive Index	ISO 489/A		1.49
<b>Mechanical Properties</b>			
Tensile Strength at yield	ISO 527	MPa	75
Tensile Strength at break			
Elongation at yield			
Elongation at break	ISO 527	%	4
Tensile Modulus of Elasticity			
Flexural Modulus	ISO 178	MPa	3210
Flexural Strength at yield	ISO 178		
Izod Impact Strength	ISO 180/1A	kJm <sup>-2</sup>	N/A
Charpy Impact Strength	ISO 179	kJm <sup>-2</sup>	12
Impact Falling Weight			
Rockwell Hardness	ISO 2039-2	M Scale	102
<b>Thermal Properties</b>			
Vicat Softening Temperature	ISO 306	°c	>110
Coefficient of Thermal Expansion	ASTM D-696	mm/m °c	0.077
Flammability	BS 476 Part 7	-	Class 3
<b>Electrical Properties</b>			
Dielectric Strength	IEC 243	kV/mm-1	15
Surface Resistivity	IEC 93	Ω m-2	>10 <sup>14</sup>

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