

Altuglas® ShieldUp is a new type of impact resistant PMMA sheet combining the key properties of cast acrylic with some additional and innovative properties such as very high impact resistance, transparency maintained in a very broad range of temperature and exceptional chemical resistance. It can be easily thermoformed, bended, laminated, cut, drilled and glued. Altuglas® ShieldUp is also suitable with anti-abrasion or anti-glare coatings.

Altuglas® ShieldUp: your new candidate of choice for many applications!

TYPICAL VALUES

	Measurement Method	Unit	Value
General Characteristics			
Density	ISO 1183	g/cm ³	1.17
Water absorption (24h)	ISO 62	%	0.2
Water absorption (20 days)	ISO 62	%	1.9
Mold Shrinkage	145°C- 1h	%	2.5
Thickness tolerance		± (0,4 mm + 0,1 x thickness)	
Mechanical properties			
Flexural Modulus (23°C)	ISO 178	MPa	2300
Tensile strength (23°C)	ISO 527-2	MPa	40
Charpy impact strength (un-notched)	ISO 179/2eU	kJ/m ²	50
Charpy impact strength (notched)	ISO 179/1eA	kJ/m ²	2.8
Surface hardness (Rockwell scale M)	ASTM D785	-	M86
Thermal properties			
Vicat softening point (B50)	ISO 306	°C	110
Coefficient of linear expansion	ISO 11359	µm/m/°C	70
Thermal conductivity	DIN 52 612	W/mK	0.20
Forming temperature	-	°C	160-200
Optical properties			
Light transmittance (3mm)	ASTM D1003	%	> 92
Refractive Index	ASTM D 1003		1.492
Haze (20°C, 3mm)	ASTM D 1003	%	< 1
Haze (80°C, 3mm)	ASTM D 1003	%	< 2
Chemical Resistance properties			
Chemical resistance (isopropanol)	EN 13359	Minutes	> 30
Chemical resistance (acetone)			limited attack
Flammability			
Self-ignition temperature	-	°C	~ 450
Melt behaviour when burning	-	-	Non drip
Glow wire resistance	EN 60695-2-11	°C	750
Euroclass classification	EN 13501	-	E
UL	UL 94	-	HB

ALTUGLAS® SHIELDUP

MAIN APPLICATIONS

- Automotive glazing
- Safety and bullet resistant glazing
- Motorbike windshield
- Boat glazing
- Industrial Glazing
- Incubators
- New energies
- Lighting
- Electronics (displays)
- POS

STORAGE

The following rules has to be applied:

- Store the product in a dry place, indoors.
- Place a polyethylene cover over the stack when a sheet is removed, to reduce moisture absorption.
- Only use original delivery pallets.
- Stack pallets of the same size and design to prevent waving.
- Place pallets on even surfaces (floor or shelf).
- The durability of the protective film is limited (sensitive to UV, temperature, humidity and chemicals).

CERTIFICATES

- Our sheets rely to the norm ISO 7823-1 : 2003 regarding types, dimensions and characteristics.
- Our management system fulfils the requirements of the ISO 9001 : 2008

Disclaimer - Please consult Arkema's disclaimer regarding the use of Arkema's products on <http://www.arkema.com/en/products/product-safety/disclaimer/index.html>