



ALFAProtech

Clear resin

AlfaClear* ABS/PBT like

An easy to use, low viscosity, water-resistant stereolithography material for use in numerous applications

Product Description

As one of the industry's most popular materials,

it is the clear solution for numerous applications. Whether you're a designer looking for highly detailed parts with superior clarity and water resistance, or an engineer focusing on durability for functional testing, AlfaClear mimicks the look and feel of clear thermoplastics, such as ABS and PBT.

AlfaClear produces optically clear parts with a smooth finish and it's ease of use helps to shorten product development and testing. This versatility means that AlfaClear is the ideal material in markets such as automotive, aerospace and consumer electronics for applications including packaging, RTV patterns, durable concept models, wind tunnel testing and investment casting patterns.

Key Benefits

- Easy to use and finish
- Superior moisture resistance
- Exceptional clarity

Ideal Applications

- Consumer products
- Fluid flow analysis
- Duct work
- Investment casting
- Lenses

*AlfaClear is our internal name of a commercial product from our Supplier

Liquid Properties		Optical Properties		
Appearance	Optically clear, near colorless	E_c	11.5 mJ/cm ²	[critical exposure]
Viscosity	~260 cps @ 30°C	D_p	6.50 mils	[slope of cure-depth vs. ln (E) curve]
Density	~1.12 g/cm ³ @ 25°C	E_{10}	54 mJ/cm ²	[exposure that gives 0.254 mm (.010 inch) thickness]
		D542	1.514	Index of Refraction (cured)

Mechanical Properties		UV Postcure	
ASTM Method	Property Description	Metric	Imperial
D638M	Tensile Strength at Break	50.4 MPa	7.3 ksi
D638M	Elongation at Break	15.5%	
D638M	Elongation at Yield	3%	
D638M	Tensile Modulus	2,770 MPa	402 ksi
D790M	Flexural Strength	68.7 MPa	10.0 ksi
D2240	Flexural Modulus	2,205 MPa	320 ksi
D256A	Izod Impact (Notched)	25 J/m	0.47 ft-lb/in
D570-98	Water Absorption	0.35%	

Thermal/Electrical Properties		UV Postcure	
ASTM Method	Property Description	Metric	Imperial
E831-05	C.T.E. -40 - 0°C (-40 - 32°F)	67 µm/m°C	37 µin/in°F
E831-05	C.T.E. 0 - 50°C (32 - 122°F)	93 µm/m°C	52 µin/in°F
E831-05	C.T.E. 50 - 100°C (122 - 212°F)	180 µm/m°C	100 µin/in°F
E831-05	C.T.E. 100 - 150°C (212 - 302°F)	187 µm/m°C	104 µin/in°F
D150-98	Dielectric Constant 60 Hz	4.0	
D150-98	Dielectric Constant 1 KHz	3.8	
D150-98	Dielectric Constant 1 MHz	3.5	
D149-97a	Dielectric Strength	15.9 kV/mm	404 V/mil
E1545-00	Tg	43°C	109°F
D648	HDT @ 0.46 MPa (66 psi)	50°C	122°F
D648	HDT @ 1.81 MPa (264 psi)	49°C	120°F

These values may vary and depend on individual machine processing and post-curing practices.



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