

Plexiglas® VS-UVT

Polymethyl Methacrylate Acrylic

Altuglas International of Arkema Inc.

Message:

Plexiglas® VS-UVT is a thermoplastic acrylic resin suitable for injection molding. It is a high flow resin designed to provide exceptional UV transmission and excellent transparency making it an outstanding choice for in-vitro diagnostic applications.

Some of the features and benefits of Plexiglas® VS-UVT are:

Exceptional UV transmittance

Excellent transparency

Outstanding scratch resistance

Superior processability

General Information			
Features	Bondability		
	BPA Free		
	Good Moldability		
	High Clarity		
	High Flow		
Uses	Medical/Healthcare Applications		
Agency Ratings	USP Class VI		
RoHS Compliance	RoHS Compliant		
Appearance	Clear/Transparent		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.18	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	27	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.20 to 0.60	%	ASTM D955
Water Absorption (24 hr)	0.30	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	84		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2900	MPa	ASTM D638
Tensile Strength (Yield)	64.8	MPa	ASTM D638
Tensile Elongation (Break)	3.0	%	ASTM D638
Flexural Modulus	2960	MPa	ASTM D790
Flexural Strength (Yield)	96.5	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	16	J/m	ASTM D256

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load ¹			ASTM D648
0.45 MPa, Annealed	80.6	°C	
1.8 MPa, Annealed	76.1	°C	
Vicat Softening Temperature			
--	87.2	°C	ASTM D1525 ²
--	81.1	°C	ASTM D1525 ³
Thermal Conductivity	0.19	W/m/K	ASTM C177
Flammability	Nominal Value		Test Method
Flame Rating	HB		UL 94
Optical	Nominal Value	Unit	Test Method
Refractive Index ⁴	1.490		ASTM D542
Transmittance (3180 μm)	92.0	%	ASTM D1003
Haze (3180 μm)	< 1.0	%	ASTM D1003
Additional Information	Nominal Value		Test Method
ASTM Classification	PMMA 0112V7		ASTM D788
Injection	Nominal Value	Unit	
Drying Temperature	65.6 to 76.7	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.10	%	
Suggested Shot Size	50	%	
Suggested Max Regrind	20	%	
Rear Temperature	182	°C	
Middle Temperature	188	°C	
Front Temperature	193	°C	
Nozzle Temperature	188	°C	
Processing (Melt) Temp	< 271	°C	
Mold Temperature	48.9 to 65.6	°C	
Injection Rate	Fast		
Back Pressure	0.689	MPa	
Screw Speed	50 to 100	rpm	
Screw L/D Ratio	15.0:1.0 to 20.0:1.0		
Screw Compression Ratio	2.0:1.0 to 2.5:1.0		
Vent Depth	0.051	mm	
NOTE			
1.	Annealing cycle: 4hrs @ 158°F		
2.	Rate A (50°C/h), Loading 1 (10 N)		
3.	Rate A (50°C/h), Loading 2 (50 N)		
4.	ND @ 72°F		

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