Plexiglas® VOD

Polymethyl Methacrylate Acrylic

Altuglas International of Arkema Inc.

Message:

Plexiglas® VOD is a thermoplastic acrylic resin formulated for injection molding applications. It is characterized by its high melt flow and low birefringence. Plexiglas® VOD has excellent weatherability and optical properties allowing it to excel in applications requiring outdoor stability, high quality surface appearance and/or precision optics. Plexiglas® VOD is easy to process due to its exceptional thermal stability, extrusion melt strength, and excellent tool surface reproduction and release properties. Supplemental moldflow simulation data is available. It has excellent resistance to many chemicals including solutions of inorganic acids, alkalis and aliphatic hydrocarbons such as VM&P naphtha and heptane. Additionally, it is virtually unaffected by a wide range of commercial products including many beverages, foodstuffs, detergent solutions and cleaners.

General Information	
Features	BPA Free
	Good Chemical Resistance
	Good Color Stability
	Good Dimensional Stability
	Good Thermal Stability
	Good UV Resistance
	Good Weather Resistance
	High Clarity
	High Flow
	High Scratch Resistance
	Low Shrinkage

Uses	Optical Data Storage
RoHS Compliance	RoHS Compliant
Appearance	Clear/Transparent
Forms	Pellets
Processing Method	Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	11	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)	90		ASTM D785

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3100	MPa	ASTM D638
Tensile Strength (Yield)	67.6	MPa	ASTM D638
Tensile Elongation (Break)	5.0	%	ASTM D638
Flexural Modulus	3100	MPa	ASTM D790
Flexural Strength (Yield)	103	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	94.4	°C	
1.8 MPa, Annealed	87.2	°C	
Vicat Softening Temperature			
--	106	°C	ASTM D1525 [2]
--	98.9	°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 0132V5		ASTM D788
Injection	**Nominal Value**	**Unit**	
Drying Temperature	79.4 to 87.8	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.10	%	
Suggested Shot Size	50	%	
Suggested Max Regrind	20	%	
Processing (Melt) Temp	< 271	°C	
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 @ 176°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		

Recommended distributors for this material

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