

VALOX™ 325 resin

Polybutylene Terephthalate

SABIC Innovative Plastics

Message:

General purpose, unreinforced, improved processing. Applications like sprinklers and nozzles, pumps, door handle, tank covers, pens, pencils etc.

General Information			
UL YellowCard	E45587-236809		
Features	Workability, good		
	General		
Uses	Handle		
	Pump parts		
	General		
	Stationery		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm ³	ASTM D792
Specific Volume	0.770	cm ³ /g	ASTM D792
Molding Shrinkage			Internal method
Flow ¹	0.90 - 1.6	%	Internal method
Flow ²	1.5 - 2.3	%	Internal method
Transverse flow ³	1.0 - 1.7	%	Internal method
Transverse flow ⁴	1.6 - 2.4	%	Internal method
Water Absorption			ASTM D570
24 hr	0.080	%	ASTM D570
Equilibrium, 23°C	0.34	%	ASTM D570
Outdoor Suitability	f1		UL 746C
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	117		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ⁵ (Yield)	51.7	MPa	ASTM D638
Tensile Elongation ⁶ (Break)	200	%	ASTM D638
Flexural Modulus ⁷ (50.0 mm Span)	2340	MPa	ASTM D790
Flexural Strength ⁸ (Yield, 50.0 mm Span)	82.7	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	53	J/m	ASTM D256
Unnotched Izod Impact (23°C)	1600	J/m	ASTM D4812
Dart Drop Impact ⁹ (23°C)	40.7	J	ASTM D3029

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 6.40mm	154	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	54.4	°C	ASTM D648
CLTE - Flow			ASTM E831
-40 to 40°C	8.1E-5	cm/cm/°C	ASTM E831
60 to 138°C	1.4E-4	cm/cm/°C	ASTM E831
RTI Elec	120	°C	UL 746
RTI Imp	120	°C	UL 746
RTI	140	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 4.0E+16	ohms · cm	ASTM D257
Dielectric Strength			ASTM D149
1.60 mm, in Oil	23	kV/mm	ASTM D149
3.20 mm, in Air	16	kV/mm	ASTM D149
3.20 mm, in Oil	16	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
100 Hz	3.30		ASTM D150
1 MHz	3.10		ASTM D150
Dissipation Factor			ASTM D150
100 Hz	2.0E-3		ASTM D150
1 MHz	0.020		ASTM D150
Arc Resistance ¹⁰	PLC 4		ASTM D495
Comparative Tracking Index (CTI)	PLC 0		UL 746
High Amp Arc Ignition (HAI)	PLC 0		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 1		UL 746
Hot-wire Ignition (HWI)	PLC 3		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.838 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	12	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 - 80	%	
Rear Temperature	232 - 249	°C	
Middle Temperature	238 - 254	°C	
Front Temperature	243 - 260	°C	
Nozzle Temperature	238 - 254	°C	
Processing (Melt) Temp	243 - 260	°C	
Mold Temperature	48.9 - 76.7	°C	
Back Pressure	0.345 - 0.689	MPa	

Screw Speed	50 - 100	rpm
Vent Depth	0.013 - 0.025	mm
NOTE		
1.	0.75 to 2.3 mm	
2.	2.3 to 4.6 mm	
3.	0.75 to 2.3 mm	
4.	2.3 to 4.6 mm	
5.	Type 1, 50mm/min	
6.	Type 1, 50mm/min	
7.	1.3 mm/min	
8.	1.3 mm/min	
9.	Modified	
10.	Tungsten electrode	

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

