VALOX™ 4521 resin

Polybutylene Terephthalate

SABIC Innovative Plastics Europe

Message:

VALOX 4521 is a high flow, 20% glass reinforced flame retardant PBT injection moulding resin. Applications: electrical applications

General Information	
UL YellowCard	E121562-220797
Filler / Reinforcement	Glass fiber reinforced material, 20% filler by weight
Additive	Flame retardancy
Features	High liquidity Flame retardancy
Uses	Electrical/Electronic Applications
Processing Method	Injection molding
Multi-Point Data	Flexural DMA (ASTM D4065) Tensile Creep (ASTM D2990) Tensile Fatigue Tensile Stress vs. Strain (ASTM D638)

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.53	g/cm³	ASTM D792
Molding Shrinkage			Internal method
Flow: 3.20mm	0.30 - 0.70	%	Internal method
Transverse flow: 3.20mm	0.60 - 0.90	%	Internal method
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus [1]	3520	MPa	ASTM D638
Tensile Strength [2]			ASTM D638
Yield	89.6	MPa	ASTM D638
Fracture	91.0	MPa	ASTM D638
Tensile Elongation [3]			ASTM D638
Yield	2.4	%	ASTM D638
Fracture	2.5	%	ASTM D638
Flexural Modulus [4] (50.0 mm Span)	4960	MPa	ASTM D790
Flexural Strength [5] (Break, 50.0 mm Span)	138	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C)	43	J/m	ASTM D256
Unnotched Izod Impact (23°C)	480	J/m	ASTM D4812
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648

0.45 MPa, unannealed, 3.20mm	219	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	205	°C	ASTM D648
RTI Elec	130	°C	UL 746
RTI Imp	130	°C	UL 746
RTI	130	°C	UL 746
Electrical	Nominal Value		Test Method
Arc Resistance [6]	PLC 5		ASTM D495
Comparative Tracking Index (CTI)	PLC 2		UL 746
High Amp Arc Ignition (HAI)	PLC 0		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 4		UL 746
Hot-wire Ignition (HWI)	PLC 0		UL 746
Flammability	Nominal Value		Test Method
Flame Rating (0.762 mm)	V-0		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	238 - 254	°C	
Middle Temperature	243 - 260	°C	
Front Temperature	249 - 266	°C	
Nozzle Temperature	243 - 260	°C	
Processing (Melt) Temp	249 - 266	°C	
Mold Temperature	65.6 - 87.8	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	50 - 80	rpm	
Vent Depth	0.025 - 0.038	mm	
NOTE			
1.	5.0 mm/min		
2.	Type 1, 5.0 mm/min		
3.	Type 1, 5.0 mm/min		
4.	1.3 mm/min		
5.	1.3 mm/min		
6.	Tungsten electrode		

Recommended distributors for this material

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