

ULTEM™ RESIN 4001

REGION ASIA

DESCRIPTION

PTFE filled, standard flow Polyetherimide (Tg 217C). ECO Conforming, UL94 V0 and 5VA listing.

TYPICAL PROPERTY VALUES

Revision 20180905

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	103	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	40	%	ASTM D 638
Tensile Modulus, 5 mm/min	3350	MPa	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	151	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	3400	MPa	ASTM D 790
Hardness, Rockwell M	110	-	ASTM D 785
Taber Abrasion, CS-17, 1 kg	2	mg/1000cy	ASTM D 1044
PV Limit, 0.51 m/s	1.9	MPa-m/s	SABIC method
K-factor xE-10, PV=2000 psi-fpm vs Steel	72	-	SABIC method
K-factor xE-10, PV=2000 psi-fpm vs Self	27	-	SABIC method
Coefficient of Friction on steel,Kinetic	0.25	-	ASTM D 1894
IMPACT			
Izod Impact, unnotched, 23°C	534	J/m	ASTM D 4812
Izod Impact, notched, 23°C	117	J/m	ASTM D 256
Izod Impact, Reverse Notched, 3.2 mm	1281	J/m	ASTM D 256
THERMAL			
HDT, 1.82 MPa, 6.4 mm, unannealed	200	°C	ASTM D 648
Relative Temp Index, Elec	170	°C	UL 746B
Relative Temp Index, Mech w/impact	170	°C	UL 746B
Relative Temp Index, Mech w/o impact	170	°C	UL 746B
PHYSICAL			
Specific Gravity	1.33	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 337°C/6.6 kgf	9.5	g/10 min	ASTM D 1238
ELECTRICAL			
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	1	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	4	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating	0.38	mm	UL 94
UL Recognized, 94-5VA Rating	1.49	mm	UL 94
INJECTION MOLDING			
Drying Temperature	135	°C	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Drying Time	4 – 6	hrs	
Drying Time (Cumulative)	10	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	350 – 370	°C	
Nozzle Temperature	350 – 370	°C	
Front - Zone 3 Temperature	350 – 370	°C	
Middle - Zone 2 Temperature	345 – 365	°C	
Rear - Zone 1 Temperature	340 – 360	°C	
Mold Temperature	135 – 165	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 – 0.076	mm	

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