ULTEM™ RESIN SF2255

REGION ASIA

DESCRIPTION

20% Glass fiber filled, super high flow for thin wall application.

INDUSTRY	SUB INDUSTRY
Automotive	Heavy Truck, Automotive Under the Hood, Aerospace, Motorcycle, Recreational/Specialty Vehicles
Building and Construction	Building Component
Consumer	Personal Accessory, Home Appliances, Commercial Appliance, Furniture
Electrical and Electronics	Energy Management, Drone Solutions, Mobile Phone - Computer - Tablets, Circuit Boards/Additives, Lighting, Printer Copier, Speaker - Earphone, Wireless Communication
Hygiene and Healthcare	Personal and Professional Hygiene
Industrial	Electrical, Material Handling, Textile, Eyewear
Mass Transportation	Rail
Packaging	Industrial Packaging

TYPICAL PROPERTY VALUES

Revision 20231212

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, brk, Type I, 5 mm/min	148	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	1.8	%	ASTM D638
Tensile Modulus, 5 mm/min	10140	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	169	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	8090	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched, 23°C	76	J/m	ASTM D256
THERMAL [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	203	°C	ASTM D648
CTE, -40°C to 150°C, flow	1.43E-05	1/°C	ASTM E831
CTE, -40°C to 150°C, xflow	5.5E-05	1/°C	ASTM E831
Relative Temp Index, Elec [2]	105	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	105	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	105	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.44	-	ASTM D792
Mold Shrinkage, flow [3]	0.3	%	SABIC method
Mold Shrinkage, xflow [3]	0.53	%	SABIC method
Melt Flow Rate, 337°C/6.6 kgf	15.4	g/10 min	ASTM D1238
Water Absorption, (23°C/24hrs)	0.06	%	ISO 62-1
Melt Volume Rate, MVR at 345°C/10.0 kg	34	cm³/10 min	ISO 1133
ELECTRICAL [1]			
Dielectric Constant			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
1.1 GHz	3.448	-	SABIC method
5 GHz	3.430	-	SABIC method
10 GHz	3.398	-	SABIC method
15 GHz	3.456	-	SABIC method
Dissipation Factor			
1.1 GHz	0.0028	-	SABIC method
5 GHz	0.0033	-	SABIC method
10 GHz	0.0036	-	SABIC method
15 GHz	0.0039	-	SABIC method
FLAME CHARACTERISTICS (2)			
UL Yellow Card Link	E207780-102158299	-	-
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
INJECTION MOLDING (4)			
Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	24	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	350 – 400	°C	
Nozzle Temperature	345 – 400	°C	
Front - Zone 3 Temperature	345 – 400	°C	
Middle - Zone 2 Temperature	340 – 400	°C	
Rear - Zone 1 Temperature	330 – 400	°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	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

DISCLAIMER