ULTEM™ RESIN DU319

DESCRIPTION

Transparent Polyetherimide blend with PET resin. Material is RoHS compliant.

This material is food contact compliant in most jurisdictions – exceptions may exist, request a declaration for details.

GENERAL INFORMATION	
Features	High Flow, Amorphous, Sustainable (bio-based offerings), Transparent/Translucent, Food contact, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyetherimide (PEI)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Automotive	Heavy Truck, Automotive Under the Hood, Aerospace, Motorcycle, Recreational/Specialty Vehicles
Building and Construction	Building Component, Water Management
Consumer	Consumer Goods, Sport/Leisure, 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, Pharmaceutical Packaging and Drug Delivery, Surgical devices, General Healthcare, Patient Testing
Industrial	Electrical, Material Handling, Textile, Eyewear
Mass Transportation	Rail
Packaging	Industrial Packaging

TYPICAL PROPERTY VALUES

Revision 20250319

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	110	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	82	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	7	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	60	%	ASTM D638
Tensile Modulus, 5 mm/min	3370	MPa	ASTM D638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	165	MPa	ASTM D790
Tensile Stress, yield, 5 mm/min	110	MPa	ISO 527
Tensile Stress, break, 5 mm/min	75	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	6	%	ISO 527
Tensile Strain, break, 5 mm/min	36	%	ISO 527
Tensile Modulus, 1 mm/min	3300	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	155	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	26	J/m	ASTM D256
Izod Impact, Reverse Notched, 3.2 mm	950	J/m	ASTM D256

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Instrumented Dart Impact Total Energy, 23°C	40	J	ASTM D3763
Izod Impact, notched 80*10*4 +23°C	4	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	4	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	3	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	181	°C	ASTM D1525
HDT, 1.82 MPa, 6.4 mm, unannealed	165	°C	ASTM D648
CTE, -40°C to 40°C, flow	4.86E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	4.86E-05	1/°C	ASTM E831
Vicat Softening Temp, Rate B/50	177	°C	ISO 306
Vicat Softening Temp, Rate B/120	180	°C	ISO 306
PHYSICAL			
Specific Gravity	1.29	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.6 – 0.7	%	SABIC method
Melt Flow Rate, 295°C/6.6 kgf	8.1	g/10 min	ASTM D1238
Density	1.3	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.5	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.17	%	ISO 62
INJECTION MOLDING			
Drying Temperature	120 – 150	°C	
Drying Time	4 – 8	Hrs	
Drying Time (Cumulative)	24	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	300 – 330	°C	
Nozzle Temperature	300 – 330	°C	
Front - Zone 3 Temperature	295 – 325	°C	
Middle - Zone 2 Temperature	290 – 320	°C	
Rear - Zone 1 Temperature	280 – 315	°C	
Mold Temperature	95 – 150	°C	
Back Pressure	0.7 – 1.4	MPa	
Screw Speed	50 – 100	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 – 0.076	mm	

DISCLAIMER