ULTEM™ RESIN DU262

DESCRIPTION

Low temperature impact keeping high heat performance, high flow Polyetherimide blend.

GENERAL INFORMATION	
Features	Chemical Resistance, High Flow, Hydrolytic Stability, Amorphous, Low Shrinkage, Creep resistant, Dimensional stability, High stiffness/Strength, High temperature resistance, Impact resistant, Low temperature impact, 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	Pharmaceutical Packaging and Drug Delivery, Surgical devices, General Healthcare, Patient Testing
Industrial	Material Handling, Textile, Eyewear
Mass Transportation	Rail
Packaging	Industrial Packaging

TYPICAL PROPERTY VALUES

Revision 20250225

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	89	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	79	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	7	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	57	%	ASTM D638
Tensile Modulus, 5 mm/min	2915	MPa	ASTM D638
Flexural Strength, 1.3 mm/min, 50 mm span	140	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	2831	MPa	ASTM D790
Flexural Strength, 2 mm/min	130	MPa	ISO 178
Flexural Modulus, 2 mm/min	2780	MPa	ISO 178
IMPACT [1]			
Izod Impact, notched, 23°C	78	J/m	ASTM D256
Izod Impact, unnotched, 23°C	2150	J/m	ASTM D4812
Izod Impact, notched, -30°C	73	J/m	ASTM D256
Izod Impact, unnotched, -30°C	2150	J/m	ASTM D4812
Izod Impact, notched 80*10*4 +23°C	7	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	137	kJ/m²	ISO 180/1U

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Izod Impact, notched 80*10*4 -30°C	6	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 -30°C	137	kJ/m²	ISO 180/1U
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	7	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	99	kJ/m²	ISO 179/1eU
Instrumented Dart Impact Total Energy, 23°C	84	J	ASTM D3763
Instrumented Dart Impact Total Energy, -30°C	65	J	ASTM D3763
Instrumented Dart Impact Ductility, 23°C	80	%	ASTM D3763
Instrumented Dart Impact Ductility, -30°C	0	%	ASTM D3763
THERMAL [1]			
HDT, 0.45 MPa, 3.2 mm, unannealed	205	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	190	°C	ASTM D648
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	206	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	188	°C	ISO 75/Af
CTE, 23°C to 150°C, flow	5.7E-05	1/°C	ASTM E831
CTE, 23°C to 150°C, xflow	5.8E-05	1/°C	ASTM E831
CTE, 23°C to 150°C, flow	5.5E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	6.0E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	219	°C	ASTM D1525
Vicat Softening Temp, Rate B/120	220	°C	ASTM D1525
PHYSICAL [1]			
Specific Gravity	1.28	-	ASTM D792
Melt Flow Rate, 337°C/6.7 kgf	11	g/10 min	ASTM D1238
Melt Volume Rate, MVR at 337°C/6.7 kg	9	cm³/10 min	ISO 1133
Moisture Absorption, (23°C/50% RH/24 hrs)	0.12	%	ASTM D570
Water Absorption, (23°C/24hrs)	0.27	%	ASTM D570
Mold Shrinkage, flow [2]	0.84	%	SABIC method
Mold Shrinkage, xflow [2]	0.91	%	SABIC method
INJECTION MOLDING [3]			
Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	12	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	340 – 360	°C	
Nozzle Temperature	345 – 355	°C	
Front - Zone 3 Temperature	350 – 360	°C	
Middle - Zone 2 Temperature	340 – 350	°C	
Rear - Zone 1 Temperature	330 – 340	°C	
Mold Temperature	130 – 160	°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) 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.

(3) 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.

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