

ULTEM™ foam DU319

Polyether Imide

SABIC Innovative Plastics Asia Pacific

Message:

Transparent Polyetherimide blend. ECO Conforming. US FDA and EU Food Contact Compliant in recognized colors.

General Information			
Features	ECO Compliant		
	Food Contact Acceptable		
Agency Ratings	EU Food Contact, Unspecified Rating		
	FDA Food Contact, Unspecified Rating		
Appearance	Clear/Transparent		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.29	g/cm ³	ASTM D792
--	1.30	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (295°C/6.6 kg)	8.1	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.60 to 0.70	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	0.50	%	
Equilibrium, 23°C, 50% RH	0.17	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	3370	MPa	ASTM D638
--	3300	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	110	MPa	ASTM D638
Yield	110	MPa	ISO 527-2/5
Break ³	82.0	MPa	ASTM D638
Break	75.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	60	%	ASTM D638
Yield	6.0	%	ISO 527-2/5
Break ⁵	60	%	ASTM D638
Break	36	%	ISO 527-2/5
Flexural Stress			
--	155	MPa	ISO 178

Yield, 100 mm Span ⁶	165	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁷ (23°C)	3.0	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
23°C	26	J/m	ASTM D256
-30°C ⁸	4.0	kJ/m ²	ISO 180/1A
23°C ⁹	4.0	kJ/m ²	ISO 180/1A
Reverse Notch Izod Impact (3.20 mm)	950	J/m	ASTM D256
Instrumented Dart Impact (23°C, Total Energy)	40.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed, 6.40 mm)	165	°C	ASTM D648
Vicat Softening Temperature			
--	181	°C	ASTM D1525 ¹⁰
--	177	°C	ISO 306/B50
--	180	°C	ISO 306/B120
CLTE			ASTM E831
Flow : -40 to 40°C	4.9E-5	cm/cm/°C	
Transverse : -40 to 40°C	4.9E-5	cm/cm/°C	
Injection	Nominal Value	Unit	
Drying Temperature	121 to 149	°C	
Drying Time	4.0 to 8.0	hr	
Drying Time, Maximum	24	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 60	%	
Rear Temperature	282 to 316	°C	
Middle Temperature	288 to 321	°C	
Front Temperature	293 to 327	°C	
Nozzle Temperature	299 to 332	°C	
Processing (Melt) Temp	299 to 332	°C	
Mold Temperature	93.3 to 149	°C	
Back Pressure	0.689 to 1.38	MPa	
Screw Speed	50 to 100	rpm	
Vent Depth	0.025 to 0.076	mm	
NOTE			
1.	5.0 mm/min		
2.	Type I, 5.0 mm/min		
3.	Type I, 5.0 mm/min		
4.	Type I, 5.0 mm/min		
5.	Type I, 5.0 mm/min		
6.	2.6 mm/min		
7.	80*10*4 sp=62mm		

8.	80*10*4
9.	80*10*4
10.	Rate B (120°C/h), Loading 2 (50 N)

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