

Edgetek™ ET9400-8005 IR BK002-01

Polyethersulfone

Key Characteristics

Product Description	
Infrared transmittance PESU	
General	
Material Status	• Commercial: Active
Regional Availability	• Asia Pacific
Uses	• Automotive Applications • Consumer Applications
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	1.37 g/cm ³	1.37 g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.65 to 0.95 %	0.65 to 0.95 %	
Flow	0.60 to 0.90 %	0.60 to 0.90 %	
Water Absorption			ISO 62
Equilibrium, 73°F (23°C), 50% RH	0.40 to 0.85 %	0.40 to 0.85 %	
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Modulus	319000 psi	2200 MPa	ISO 527-1
Tensile Stress ² (Yield)	12300 psi	85.0 MPa	ISO 527-2/50
Tensile Strain (Yield)	6.5 %	6.5 %	ISO 527-2
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179
-22°F (-30°C)	1.4 ft·lb/in ²	3.0 kJ/m ²	
73°F (23°C)	2.9 ft·lb/in ²	6.0 kJ/m ²	
Charpy Unnotched Impact Strength	No Break	No Break	ISO 179
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Ball Indentation Hardness (H 358/30)	18100 psi	125 MPa	ISO 2039-1
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Deflection Temperature Under Load			ISO 75-2/A
264 psi (1.8 MPa), Annealed	374 °F	190 °C	
Optical	Typical Value (English)	Typical Value (SI)	Test Method
Light Transmittance			Internal Method
78.74 mil (2000 μm), 720 nm	25.0 to 33.0 %	25.0 to 33.0 %	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	266 to 302 °F	130 to 150 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Suggested Max Moisture	0.020 %	0.020 %
Processing (Melt) Temp	644 to 734 °F	340 to 390 °C
Mold Temperature	266 to 356 °F	130 to 180 °C

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Notes

¹ Typical values are not to be construed as specifications.

² Tensile rate: 50mm/min

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