Ultem® 1000-7107 PEI Rod

Grade: Ultem® 1000-7107
Formula: PEI
Diameter: 12.3mm
Length: 300mm
Colour: Black
CAS Number: 61128-46-9
UOM Code: 219-757-68
SKU: 1000073554
Product Code: EI31-RD-000108

Material Properties for Polymers

Chemical Resistance

Element	Value
Acids - concentrated	Good(-Fair?)
Acids - dilute	Good
Alcohols	Good
Alkalis	Good-Poor
Aromatic hydrocarbons	Poor
Greases and Oils	Good
Halogenated Hydrocarbons	Good-Poor
Ketones	Poor

Electrical Properties

Element	Value
Dielectric constant @1kHz	3.1
Dissipation factor @ 1MHz	0.0013@1
Dielectric strength(kV mm?¹)	30@1.6mm
Surface resistivity(Ohm/sq)	4.10¹³
Volume resistivity(Ohmcm)	7.10¹?

Physical Properties

Element	Value

Flammability	V-0 @ 0.4mm
Radiation resistance	Good
Resistance to Ultra-violet	Good/Fair
Limiting oxygen index(%)	47
Water absorption - equilibrium(%)	1.3
Water absorption - over 24 hours(%)	0.25
Density(gcm?³)	1.27

Mechanical Properties

Element	Value
Hardness - Rockwell	R125
Poisson's ratio	0.44
Elongation at break(%)	60
Compressive modulus(GPa)	2.9
Tensile modulus(GPa)	2.9
Izod impact strength(J m?¹)	50
Abrasive resistance - ASTM D1044(mg/1000 cycles)	10
Tensile strength(MPa)	85

Thermal Properties

Element	Value
Heat-deflection temperature - 0.45MPa(C)	200
Heat-deflection temperature - 1.8MPa(C)	190
Upper working temperature(C)	170-200
Specific heat(J K?¹ kg?¹)	2000
Thermal conductivity(W m?¹ K?¹)	0.22@23°C
Coefficient of thermal expansion(x10?? K?¹)	56

Pultrusions

Element	Value
Compressive strength(MPa)	140