

Polybenzimidazole Film

Formula: PBI

Thickness: 12mm

Length 1: 50mm

Length 2: 50mm

Colour: Black

UOM Code: 040-401-54

SKU: 1000005458-group

Product Code: BI30-SH-000130

Material Properties for Polymers

Chemical Resistance

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

Mechanical Properties

Element	Value
Coefficient of friction	0.19-0.27
Hardness - Rockwell	K115
Poisson's ratio	0.34
Elongation at break(%)	3
Compressive modulus(GPa)	6.2
Tensile modulus(GPa)	5.9
Izod impact strength(J m ²)	590unnotched
Tensile strength(MPa)	160

Electrical Properties

Element	Value
Dielectric constant @1MHz	3.2
Dielectric strength(kV mm ⁻¹)	21
Volume resistivity(Ohmcm)	8x10 ¹²

Physical Properties

Element	Value
Flammability	Does not burn
Radiation resistance	Good
Limiting oxygen index(%)	58
Water absorption - over 24 hours(%)	0.4
Density(gcm ⁻³)	1.3

Thermal Properties

Element	Value
Heat-deflection temperature - 0.45MPa(C)	435
Upper working temperature(C)	260-400
Thermal conductivity(W m ⁻¹ K ⁻¹)	0.41@23°C
Coefficient of thermal expansion(x10 ⁻⁶ K ⁻¹)	23

Pultrusions

Element	Value
Compressive strength(MPa)	400