

DuPont™ Kevlar® 49 Polyaramid Fiber (Polyparaphenylene terephthalamide)

Grade: DuPont™ Kevlar® 49
Formula: Polyparaphenylene terephthalamide
Length: 1000m
Filament Diameter: 0.012mm
Number Of Filaments: 5000
Tex Number: 790
UOM Code: 399-483-51
SKU: 1000029531-group
Product Code: AR30-FB-000179

Material Properties for Polymers

Chemical Resistance

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

Physical Properties

Element	Value
Resistance to Ultra-violet	Fair
Water absorption(%)	3.5
Water absorption - equilibrium(%)	3.5
Density(gcm ³)	1.44

Thermal Properties

Element	Value
Lower working temperature(C)	-200
Upper working temperature(C)	180-245
Specific heat(J K ⁻¹ kg ⁻¹)	1400
Thermal conductivity(W m ⁻¹ K ⁻¹)	0.04@23°C
Coefficient of thermal expansion(x10 ⁻⁶ K ⁻¹)	-2Along Axis

Mechanical Properties

Element	Value
Tensile modulus(GPa)	59-124
Tensile strength(MPa)	2760