Polycarbonate Granules

Polycarbonate granules provide impact toughness, dimensional stability, and optical clarity for moulded lenses, housings, structural parts, and research on polymer blending and optical performance. **SKU:** 1000010865-group **Product Code:** CT30-GL-000111

Material Properties for Polymers

Physical Properties

Element	Value
Abbe number	34
Flammability	V0-V2
Radiation resistance	Fair
Refractive index	1.584-6
Resistance to Ultra-violet	Fair
Limiting oxygen index(%)	25-27
Water absorption - equilibrium(%)	0.35
Water absorption - over 24 hours(%)	0.1
Density(gcm?³)	1.2

Chemical Resistance

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

Mechanical Properties

Element	Value

Coefficient of friction	0.31
Hardness - Rockwell	M70
Poisson's ratio	0.37
Elongation at break(%)	100-150
Tensile modulus(GPa)	2.3-2.4
Izod impact strength(J m?¹)	600-850
Abrasive resistance - ASTM D1044(mg/1000 cycles)	Oct-15
Tensile strength(MPa)	55-75

Electrical Properties

Element	Value
Dielectric constant @1MHz	2.9
Dissipation factor @ 1MHz	0.01
Dielectric strength(kV mm?¹)	15-67
Surface resistivity(Ohm/sq)	10¹?
Volume resistivity(Ohmcm)	10¹?-10¹?

Thermal Properties

Element	Value
Heat-deflection temperature - 0.45MPa(C)	140
Heat-deflection temperature - 1.8MPa(C)	128-138
Lower working temperature(C)	-135
Upper working temperature(C)	115-130
Specific heat(J K?¹ kg?¹)	1200
Thermal conductivity(W m?¹ K?¹)	0.19-0.22@23°C
Coefficient of thermal expansion(x10?? K?¹)	66-70

Pultrusions

Element	Value
Compressive strength(MPa)	>80