Additive Free Polymer PMMA Spherical Powder

Additive free polymer PMMA spherical powder provides optical clarity, high purity, and controlled particle size, supporting calibration, imaging, microfluidics, composites, and additive manufacturing research. **SKU:** 1000064547-group
Product Code: ME30-PD-000110

Material Properties for Polymers

Physical Properties

Element	Value
Abbe number	57.2
Flammability	HB
Radiation resistance	Fair
Refractive index	1.49
Resistance to Ultra-violet	Good
Limiting oxygen index(%)	17-20
Water absorption - over 24 hours(%)	0.2
Density(gcm?³)	1.19

Chemical Resistance

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

Electrical Properties

Element	Value

Dielectric constant @1MHz	2.6
Dissipation factor @ 1MHz	0.014
Dielectric strength(kV mm?¹)	15
Surface resistivity(Ohm/sq)	10¹?
Volume resistivity(Ohmcm)	2-14 x 10¹?

Mechanical Properties

Element	Value
Hardness - Rockwell	M92-100
Poisson's ratio	0.35-0.4
Elongation at break(%)	2.5-4
Tensile modulus(GPa)	2.4-3.3
Izod impact strength(J m?¹)	16-32
Tensile strength(MPa)	80

Thermal Properties

Element	Value
Heat-deflection temperature - 0.45MPa(C)	105
Heat-deflection temperature - 1.8MPa(C)	95
Lower working temperature(C)	-40
Upper working temperature(C)	50-90
Specific heat(J K?¹ kg?¹)	1400-1500
Thermal conductivity(W m?¹ K?¹)	0.17-0.19@23°C
Coefficient of thermal expansion(x10?? K?¹)	70-77