

# PP Granules

**Formula:** PP

**Nominal Granule Size:** 4mm

**Weight:** 200g

**Structure:** Isotactic

**Type:** Injection Moulding

**CAS Number:** 9003-07-0

**UOM Code:** 017-543-66

**SKU:** 1000002120-group

**Product Code:** PP30-GL-000115

## Material Properties for Polymers

### Chemical Resistance

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

### Mechanical Properties

Element	Value
Coefficient of friction	0.1-0.3
Hardness - Rockwell	R80-100
Elongation at break( % )	150-300, for biax film >50
Tensile modulus( GPa )	0.9-1.5, for biax film 2.2-4.2
Izod impact strength( J m <sup>2</sup> )	20-100
Abrasive resistance - ASTM D1044( mg/1000 cycles )	13-16
Tensile strength( MPa )	25-40, for biax film 130-300,

## Electrical Properties

Element	Value
Dielectric constant @ 1MHz	2.2-2.6
Dissipation factor @ 1MHz	0.0003-0.0005
Dielectric strength( kV mm <sup>-1</sup> )	30-40
Surface resistivity( Ohm/sq )	10 <sup>13</sup>
Volume resistivity( Ohmcm )	10 <sup>12</sup> -10 <sup>14</sup>

## Physical Properties

Element	Value
Flammability	HB
Radiation resistance	Fair
Refractive index	1.49
Resistance to Ultra-violet	Poor
Limiting oxygen index( % )	18
Water absorption - equilibrium( % )	0.03
Density( gcm <sup>-3</sup> )	0.9

## Thermal Properties

Element	Value
Heat-deflection temperature - 0.45MPa( C )	100-105
Heat-deflection temperature - 1.8MPa( C )	60-65
Lower working temperature( C )	50
Upper working temperature( C )	90-120
Specific heat( J K <sup>-1</sup> kg <sup>-1</sup> )	1700-1900
Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )	0.1-0.22@23°C
Coefficient of thermal expansion( x10 <sup>-4</sup> K <sup>-1</sup> )	100-180