

# HDPE Granules

**Formula:** HDPE

**Weight:** 10000g

**Melt Flow Rate (MFR):** 7.6g/10min

**Colour:** Natural

**CAS Number:** 9002-88-4

**UOM Code:** 928-035-43

**SKU:** 1000085225-group

**Product Code:** ET32-GL-000110

## Material Properties for Polymers

### Chemical Resistance

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

### Mechanical Properties

Element	Value
Coefficient of friction	0.29
Hardness - Rockwell	D60-73 - Shore
Poisson's ratio	0.46
Tensile modulus( GPa )	0.5-1.2
Izod impact strength( J m <sup>21</sup> )	20-210
Tensile strength( MPa )	15-40

### Electrical Properties

<b>Element</b>	<b>Value</b>
Dielectric constant @ 1MHz	2.3-2.4
Dissipation factor @ 1MHz	1-10x 10 <sup>-4</sup>
Dielectric strength( kV mm <sup>-1</sup> )	22
Surface resistivity( Ohm/sq )	10 <sup>13</sup>
Volume resistivity( Ohmcm )	10 <sup>12</sup> -10 <sup>14</sup>

## **Physical Properties**

<b>Element</b>	<b>Value</b>
Flammability	HB
Radiation resistance	Fair
Refractive index	1.54
Resistance to Ultra-violet	Poor
Limiting oxygen index( % )	17
Water absorption - over 24 hours( % )	0.01
Density( gcm <sup>-3</sup> )	0.95

## **Thermal Properties**

<b>Element</b>	<b>Value</b>
Heat-deflection temperature - 0.45MPa( C )	75
Heat-deflection temperature - 1.8MPa( C )	46
Upper working temperature( C )	55-120
Specific heat( J K <sup>-1</sup> kg <sup>-1</sup> )	1900
Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )	0.45-0.52@23°C
Coefficient of thermal expansion( x10 <sup>-4</sup> K <sup>-1</sup> )	100-200