

# LDPE Disk

**Formula:** LDPE

**Thickness:** 0.75mm

**Diameter:** 25.4mm

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

**UOM Code:** 102-935-46

**SKU:** 1000016385-group

**Product Code:** ET31-FM-000170

## Material Properties for Polymers

### Chemical Resistance

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

### Electrical Properties

Element	Value
Dielectric constant @ 1MHz	2.2-2.35
Dissipation factor @ 1MHz	1-10x 10 <sup>??</sup>
Dielectric strength( kV mm <sup>?1</sup> )	27
Surface resistivity( Ohm/sq )	10 <sup>13</sup>
Volume resistivity( Ohmcm )	10 <sup>1?</sup> -10 <sup>1?</sup>

### Physical Properties

Element	Value
Flammability	HB

<b>Element</b>	<b>Value</b>
Radiation resistance	Fair
Refractive index	1.51
Resistance to Ultra-violet	Poor
Limiting oxygen index( % )	17
Water absorption - over 24 hours( % )	0.015
Density( gcm <sup>3</sup> )	0.92

## **Mechanical Properties**

<b>Element</b>	<b>Value</b>
Hardness - Rockwell	D41-46 - Shore
Elongation at break( % )	400
Tensile modulus( GPa )	0.1-0.3
Izod impact strength( J m <sup>2</sup> )	1000
Tensile strength( MPa )	May-25

## **Thermal Properties**

<b>Element</b>	<b>Value</b>
Heat-deflection temperature - 0.45MPa( C )	50
Heat-deflection temperature - 1.8MPa( C )	35
Lower working temperature( C )	-60
Upper working temperature( C )	50-90
Specific heat( J K <sup>-1</sup> kg <sup>-1</sup> )	1900-2300
Thermal conductivity( W m <sup>-1</sup> K <sup>-1</sup> )	0.33@23°C
Coefficient of thermal expansion( x10 <sup>-5</sup> K <sup>-1</sup> )	100-200