

LUBMER™ LS4140 UHMWPE Granules

Grade: LUBMER™ LS4140

Formula: UHMW PE

Nominal Granule Size: 3mm

Weight: 10000g

CAS Number: 9002-88-4

UOM Code: 629-240-55

SKU: 1000082640-group

Product Code: ET30-GL-000105

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 | 0.1-0.2 |
| Hardness - Rockwell | R50-70 |
| Poisson's ratio | 0.46 |
| Elongation at break(%) | 500 |
| Tensile modulus(GPa) | 0.2-1.2 |
| Izod impact strength(J m ²) | 1000 |
| Tensile strength(MPa) | 20-40 |

Electrical Properties

| Element | Value |
|--|------------------------|
| Dielectric constant @ 1MHz | 2.3 |
| Dissipation factor @ 1MHz | 1-10x 10 ⁻⁴ |
| Dielectric strength(kV mm ⁻¹) | 28 |
| Surface resistivity(Ohm/sq) | 10 ¹³ |
| Volume resistivity(Ohmcm) | 10 ¹⁷ |

Physical Properties

| Element | Value |
|---------------------------------------|-------|
| Flammability | HB |
| Radiation resistance | Fair |
| Resistance to Ultra-violet | Poor |
| Limiting oxygen index(%) | 17 |
| Water absorption - over 24 hours(%) | 0.01 |
| Density(gcm ⁻³) | 0.94 |

Thermal Properties

| Element | Value |
|---|------------------|
| Heat-deflection temperature - 0.45MPa(C) | 69 |
| Heat-deflection temperature - 1.8MPa(C) | 42 |
| Upper working temperature(C) | 55-95 |
| Specific heat(J K ⁻¹ kg ⁻¹) | 1900 |
| Thermal conductivity(W m ⁻¹ K ⁻¹) | 0.42-0.51 @ 23°C |
| Coefficient of thermal expansion(x10 ⁻⁵ K ⁻¹) | 130-200 |