



ROYAL GLOBAL ENERGY

RGE's core business Oil, Gas, Refining and Petrochemicals

Product Name: LDPE

Property	LDPE	HDPE	UHMW	ASTM or UL test
Density (lb/in ³) (g/cm ³)	0.033 0.92	0.035 0.96	0.034 0.93	D792
Water Absorption, 24 hrs (%)	<0.01	<0.01	<0.01	D570
Tensile Strength (psi) at 72°F	1,400	4,600	5,800	D638
Tensile Strength (psi) at 150°F	400	400	400	D638
Tensile Modulus (psi)	57,000	200,000	80,000	D638
Tensile Elongation at Break (%)	100	400	300	D638
Flexural Strength at Yield (psi)	1,500	4,600	3,500	D790
Flexural Modulus (psi)	29,000	174,000	88,000	D790
Compressive Strength (psi)	1,400	4,600	3,000	D695
Compressive Modulus (psi)	54,000	100,000	80,000	D695
Shear Strength (psi)	-	-	3,000	D732
Hardness, Shore D	D45	D69	D62-D66	D785
IZOD Notched Impact (ft-lb/in)	No Break	1.3	No Break	D256
Coefficient of Linear Thermal Expansion (x 10 ⁻⁵ in./in./°F)	-	6	11	D696
Heat Deflection Temp (°F / °C) at 66 psi at 264 psi	120 / 48 116 / 46	170 / 76 176 / 80	203 / 95 180 / 82	D648
Approx. Melting Temperature (°F / °C)	244 / 118	260 / 125	275 / 136	D3418
Max Operating Temp (°F / °C)	160 / 71	180 / 82	180 / 82	-
Thermal Conductivity (BTU- in/ft ² -hr-°F) (x 10 ⁻⁴ cal/cm-sec-°C)	- -	- -	2.84 10.0	C177
Flammability Rating	HB	HB<	HB	UL94
Dielectric Strength (V/mil) short time, 1/8" thick	460-700	450-500	2300	D149
Dielectric Constant at 1 MHz	2.25- 2.30	2.30- 2.35	2.30- 2.35	D150
Dissipation Factor at 1 kHz	0.0002	0.0002	0.0005	D150
Surface Resistivity (ohm/square) at 50% RH	> 10 ¹⁵	> 10 ¹⁵	> 10 ¹⁵	D257
Arc Resistance (sec)	135-160	200-250	250-350	D495