

## Quadrant EPP LDPE Modified Natural Low Density Polyethylene

Categories: Polymer; Thermoplastic; Polyethylene (PE); LDPE; Low Density Polyethylene (LDPE), Molded

Physical Properties	Metric	English	Comments
Specific Gravity	0.920 g/cc	0.920 g/cc	ASTM D792
Water Absorption	<= 0.010 %	<= 0.010 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	<= 0.010 %	<= 0.010 %	Immersion; ASTM D570(2)

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	45	45	ASTM D2240
Tensile Strength	9.65 MPa	1400 psi	ASTM D638
Elongation at Break	100 %	100 %	ASTM D638
Tensile Modulus	0.393 GPa	57.0 ksi	ASTM D638
Flexural Strength	10.3 MPa	1500 psi	ASTM D790
Flexural Modulus	0.200 GPa	29.0 ksi	ASTM D790
Compressive Strength	9.65 MPa	1400 psi	10% Def.; ASTM D695
Compressive Modulus	0.372 GPa	54.0 ksi	ASTM D695
Izod Impact, Notched	NB	NB	ASTM D256 Type A

Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	>= 1.00e+15 ohm	>= 1.00e+15 ohm	ASTM D257

Thermal Properties	Metric	English	Comments
Melting Point	118 °C	244 °F	Crystalline, Peak; ASTM D3418
Maximum Service Temperature, Air	71.1 °C	160 °F	Long Term
Deflection Temperature at 1.8 MPa (264 psi)	46.7 °C	116 °F	ASTM D648
Flammability, UL94	HB	HB	1/8 inch (Estimated Rating)

Compliance Properties	Metric	English	Comments
3A-Dairy	No	No	
Canada AG	No	No	
FDA	Yes	Yes	
NSF	No	No	
USDA	Yes	Yes	
USP Class VI	No	No	

Chemical Resistance Properties	Metric	English	Comments
Acids, Strong (pH 1-3)	Unacceptable	Unacceptable	
Acids, Weak	Unacceptable	Unacceptable	
Alcohols	Unacceptable	Unacceptable	
Alkalies, Strong (pH 11-14)	Unacceptable	Unacceptable	
Alkalies, Weak	Unacceptable	Unacceptable	
Chlorinated Solvents	Unacceptable	Unacceptable	
Conductive / Static Dissipative	No	No	
Continuous Sunlight	Unacceptable	Unacceptable	
Hot Water / Steam	Limited	Limited	
Hydrocarbons - Aliphatic	Unacceptable	Unacceptable	
Hydrocarbons - Aromatic	Unacceptable	Unacceptable	
Inorganic Salt Solutions	Acceptable	Acceptable	
Ketones, Esters	Unacceptable	Unacceptable	

Descriptive Properties			
Machinability		3	1-10, 1=Easier to Machine