



LDPE (Quadrant)

Natural Low Density Polyethylene

Physical Properties	Metric	English	Comments
Specific Gravity	0.92 g/cc	0.0332 lb/in ³	ASTM D792
Water Absorption	Max 0.01 %	Max 0.01 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	Max 0.01 %	Max 0.01 %	Immersion; ASTM D570(2)
Mechanical Properties			
Hardness, Shore D	45	45	ASTM D2240
Tensile Strength, Ultimate	11.7 MPa	1700 psi	ASTM D638
Elongation at Break	400 %	400 %	ASTM D638
Tensile Modulus	0.393 GPa	57 ksi	ASTM D638
Flexural Modulus	0.2 GPa	29 ksi	ASTM D790
Flexural Yield Strength	10.3 MPa	1500 psi	ASTM D790
Compressive Strength	9.65 MPa	1400 psi	10% Def., 73°F; ASTM D695
Compressive Modulus	0.393 GPa	57 ksi	ASTM D695
Izod Impact, Notched	NB	NB	ASTM D256 Type A
Electrical Properties			
Surface Resistivity per Square	Min 1e+015 ohm	Min 1e+015 ohm	ASTM D257
Thermal Properties			
Melting Point	110 °C	230 °F	Crystalline, Peak; ASTM D3418
Maximum Service Temperature, Air	71.1 °C	160 °F	Long Term
Flammability, UL94 (Estimated Rating)	HB	HB	1/8 inch
Qualitative Processing Properties			
Compliance - FDA	Compliant		
Machinability	3	1-10, 1=Easier to Machine	
Service in Alcohols	Unacceptable		
Service in Aliphatic Hydrocarbons	Unacceptable		
Service in Aromatic Hydrocarbons	Unacceptable		
Service in Chlorinated Solvents	Unacceptable		
Service in Ethers	Unacceptable		
Service in Ketones	Unacceptable		
Service in Strong Acids	Unacceptable		
Service in Strong Alkalies	Unacceptable		
Service in Sunlight	Unacceptable		
Service in Weak Acids	Unacceptable		
Service in Weak Alkalies	Unacceptable		

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