

Quadrant EPP Proteus® LSG HS PP - Heat Stabilized Polypropylene (ASTM Product Data Sheet)

Category : Polymer , Thermoplastic , Polypropylene (PP)

Material Notes:

Order this product through the following link:

http://www.lookpolymers.com/polymer_Quadrant-EPP-Proteus-LSG-HS-PP-Heat-Stabilized-Polypropylene-ASTM-Product-Data-Sheet.php

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)

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	113	113	ASTM D785
Hardness, Shore D	77	77	ASTM D2240
Tensile Strength, Ultimate	33.8 MPa	4900 psi	ASTM D638
Elongation at Yield	8 %	8 %	ASTM D638
Tensile Modulus	0.807 GPa	117 ksi	ASTM D638
Flexural Strength	48.3 MPa	7000 psi	ASTM D790
Flexural Modulus	1.25 GPa	182 ksi	ASTM D790
Compressive Strength	24.1 MPa	3500 psi	10% Def., 73°F; ASTM D695
Compressive Modulus	1.48 GPa	214 ksi	ASTM D695
Izod Impact, Notched	0.267 J/cm	0.500 ft-lb/in	ASTM D256 Type A

Thermal Properties	Metric	English	Comments
CTE, linear	108 $\mu\text{m/m-}^{\circ}\text{C}$ @Temperature -40.0 - 149 $^{\circ}\text{C}$	60.0 $\mu\text{in/in-}^{\circ}\text{F}$ @Temperature -40.0 - 300 $^{\circ}\text{F}$	TMA; ASTM E831
Melting Point	164 $^{\circ}\text{C}$	327 $^{\circ}\text{F}$	Crystalline, Peak; ASTM D3418
Maximum Service Temperature, Air	82.2 $^{\circ}\text{C}$	180 $^{\circ}\text{F}$	Long Term
Deflection Temperature at 0.46 MPa (66 psi)	>= 149 $^{\circ}\text{C}$	>= 300 $^{\circ}\text{F}$	ASTM D648
Flammability, UL94	HB	HB	1/8 inch (Estimated Rating)

Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	$\geq 1.00 \times 10^{13}$ ohm	$\geq 1.00 \times 10^{13}$ ohm	ASTM D257

Compliance Properties	Metric	English	Comments
FDA	No	No	

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

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