

LyondellBasell Lupolen® 6031 M

Easy flow, injection molding grade for fruit crates, tote boxes and bottle crates, cartridges, protective headgear, buckets, dishes, cartridges for adhesive film canisters, aerosol lids, child seats for automobiles, connector housings, cable clips.

Physical Properties	Metric	English	Comments
Density	0.963 g/cc	0.0348 lb/in ³	
Water Absorption	0.010 %	0.010 %	
Moisture Absorption at Equilibrium	0.050 %	0.050 %	
Linear Mold Shrinkage, Flow	0.016 cm/cm	0.016 in/in	
Linear Mold Shrinkage, Transverse	0.013 cm/cm	0.013 in/in	

Melt Flow	10.5 g/10 min @Load 2.16 kg, Temperature 190 °C	10.5 g/10 min @Load 4.76 lb, Temperature 374 °F
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Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	31.0 MPa	4500 psi	
Elongation at Break	>= 50 %	>= 50 %	
Elongation at Yield	7.0 %	7.0 %	
Tensile Modulus	1.50 GPa	218 ksi	
Tensile Impact Strength	65.0 kJ/m ²	30.9 ft-lb/in ²	
Tensile Creep Modulus, 1 hour	570 MPa	82700 psi	
Tensile Creep Modulus, 1000 hours	400 MPa	58000 psi	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	
Surface Resistance	1.00e+14 ohm	1.00e+14 ohm	
Dielectric Constant	2.4 @Frequency 100 Hz	2.4 @Frequency 100 Hz	

	2.4 @Frequency 1e+6 Hz	2.4 @Frequency 1e+6 Hz
Dielectric Strength	150 kV/mm	3810 kV/in
Dissipation Factor	0.00020 @Frequency 100 Hz	0.00020 @Frequency 100 Hz
	0.00020 @Frequency 1e+6 Hz	0.00020 @Frequency 1e+6 Hz

Comparative Tracking Index

600 V

600 V

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	135 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 20.0 $^\circ\text{C}$	75.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 68.0 $^\circ\text{F}$	
Melting Point	135 $^\circ\text{C}$	275 $^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	86.0 $^\circ\text{C}$	187 $^\circ\text{F}$	
Deflection Temperature at 1.8 MPa (264 psi)	49.0 $^\circ\text{C}$	120 $^\circ\text{F}$	
Vicat Softening Point	72.0 $^\circ\text{C}$	162 $^\circ\text{F}$	
Flammability, UL94	HB @Thickness 0.400 mm	HB @Thickness 0.0157 in	
Oxygen Index	17 %	17 %	