



Tuesday, January 24, 2006

**Lupilon® S-2000UR**

Mitsubishi Engineering-Plastics Corp - Polycarbonate

Unit System:

Actions Legend ([Open](#))**General Information****General**

Material Status	<ul style="list-style-type: none"> <li>Commercial: Active</li> </ul>
Availability	<ul style="list-style-type: none"> <li>Europe</li> <li>North America</li> <li>Pacific Rim</li> </ul>
Test Standards Available	<ul style="list-style-type: none"> <li>ASTM</li> <li>ISO</li> </ul>
Features	<ul style="list-style-type: none"> <li>Clarity, High</li> <li>Colorability, Good</li> <li>Dimensional Stability, Good</li> <li>Electrically Insulating</li> <li>Extinguishing, Self</li> <li>Heat Resistance, High</li> <li>Impact Resistance, Good</li> <li>Mold Release, Good</li> <li>Toxicity, None</li> <li>UV Resistance, Good</li> <li>Viscosity, Medium</li> <li>Weather Resistance, Good</li> </ul>
Uses	<ul style="list-style-type: none"> <li>Automotive Applications</li> <li>Electrical/Electronic Applications</li> <li>Medical Appliances</li> <li>Optical Applications</li> <li>Sporting Goods</li> </ul>
Forms	<ul style="list-style-type: none"> <li>Pellets</li> </ul>
Processing Method	<ul style="list-style-type: none"> <li>Injection Molding</li> </ul>

**ASTM and ISO Properties <sup>1</sup>**

Physical	Nominal Value	Unit	Test Method
Density -Specific Gravity	1.20	sp gr 23/23°C	ASTM D792
Density	1.20	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	12	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	0.671	in <sup>3</sup> /10min	ISO 1133
Mold Shrink, Linear-Flow (0.118 in)	0.0050 to 0.0080	in/in	ASTM D955
Mold Shrink, Linear-Trans (0.118 in)	0.0050 to 0.0080	in/in	ASTM D955
Molding Shrinkage			ISO 294-4
(Across Flow)	0.50 to 0.70	%	
(Flow)	0.50 to 0.70	%	
Water Absorption @ 24 hrs	0.25	%	ASTM D570
Water Absorption 24h/23C	0.24	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	348000	psi	ISO 527-1, -2
Tensile Strength (73 °F)	9020	psi	ASTM D638
Tensile Stress at Yield	8850	psi	ISO 527-1, -2

Tensile Strain at Yield	5.6 %	ISO 527-1, -2
Tensile Elongation @ Brk (73 °F)	120 %	ASTM D638
Nominal Tensile Strain at Break	110 %	ISO 527-1, -2
Flexural Modulus (73 °F)	334000 psi	ASTM D790
Flexural Modulus	334000 psi	ISO 178
Flexural Strength (73 °F)	12400 psi	ASTM D790
Flexural Strength	13500 psi	ISO 178
<b>Impact</b>	<b>Nominal Value</b>	<b>Unit</b>
Charpy Notched Impact Strength (73 °F)	36.2	ft-lb/in <sup>2</sup>
Charpy Unnotched Impact Strength (73 °F)	No Break	ft-lb/in <sup>2</sup>
Notched Izod Impact (0.126 in)	16.3	ft-lb/in
<b>Hardness</b>	<b>Nominal Value</b>	<b>Unit</b>
Rockwell Hardness		ASTM D785
(M-Scale)	65	
(R-Scale)	123	
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>
DTUL @66psi - Unannealed	302	°F
HDT B (0.45 MPa) Unannealed	289	°F
DTUL @264psi - Unannealed	277	°F
HDT A (1.80 MPa) Unannealed	264	°F
CLTE, Flow (68 to 176°F (20 to 80°C))	0.000036	in/in/°F
Coefficient of Linear Thermal Expansion, Flow	0.000036	in/in/°F
Coefficient of Linear Thermal Expansion, Transverse	0.000037	in/in/°F
<b>Electrical</b>	<b>Nominal Value</b>	<b>Unit</b>
Surface Resistivity	1.0E+15	ohms
Surface Resistivity	6.0E+15	ohms
Volume Resistivity	2.1E+16	ohm-cm
Volume Resistivity	3.0E+16	ohm-cm
Dielectric Strength	508	V/mil
Dielectric Constant (1E+6 Hz)	2.850	
Dissipation Factor (1E+6 Hz)	0.0082	
Dissipation Factor		IEC 60250
(100 Hz)	0.000600	
(1E+6 Hz)	0.00900	
Comp Track Index	280	V
Electric Strength		IEC 60243-1
(0.0394 in)	790	V/mil
(0.118 in)	460	V/mil
Relative Permittivity		IEC 60250
(100 Hz)	3.10	
(1E+6 Hz)	3.10	
<b>Additional Properties</b>		

Water Absorption, ASTM D570, 24 hr, 73°F: 0.23 - 0.26 %  
Deflection Temperature Under Load, ASTM D648, 66 psi: 293 - 311°F  
Deflection Temperature Under Load, ASTM D648, 264 psi: 270 - 284°F  
Coefficient of Linear Thermal Expansion, ASTM D696, 68 to 176°F: 3.33 - 3.88 in<sup>-5</sup>/in-°F  
Tensile Strength, ASTM D638, 73°F: 8528 - 9514 psi  
Tensile Elongation, ASTM D638, 73°F: 90 - 140 %  
Flexural Strength, ASTM D790, 73°F: 11661 - 13082 psi  
Izod Impact Strength, ASTM D256, Notched, 0.125 in: 13.9 - 18.7 ft-lb/in  
Rockwell Hardness, ASTM D785, R-Scale: 122 - 124  
Rockwell Hardness, ASTM D785, M-Scale: 60 - 70  
Dielectric Strength, ASTM D149: 18 - 22 kV/mm  
Molding Shrinkage, ISO 294-4, 3.2 mm, Flow: 0.5 to 0.7%  
Molding Shrinkage, ISO 294-4, 3.2 mm, Across Flow: 0.5 to 0.7%

## Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.



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