

Panlite® ML-5206ZHS

TEIJIN LIMITED - Polycarbonate

Sunday, February 25, 2018

General Information

Product Description

Extrusion molding grade, Light diffusion grade, Weather resistance, Flame resistance

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Flame Retardant	• Low Light Diffusion	• Weather Resistant
Uses	• LEDs	• Lighting Applications	• Lighting Diffusers
Appearance	• Milky White		
Forms	• Pellets		
Processing Method	• Extrusion		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	2.50	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 4.00 mm	0.50 to 0.70	%	
Flow : 4.00 mm	0.50 to 0.70	%	
Water Absorption (23°C, 24 hr)	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2400	MPa	ISO 527-2/1
Tensile Stress (Yield)	65.0	MPa	ISO 527-2/50
Tensile Stress (Break)	58.0	MPa	ISO 527-2/50
Tensile Strain (Yield)	6.0	%	ISO 527-2/50
Nominal Tensile Strain at Break	50	%	ISO 527-2/50
Flexural Modulus ²	2260	MPa	ISO 178
Flexural Stress ²	98.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	10	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	126	°C	ISO 75-2/A
CLTE - Flow	7.0E-5	cm/cm/°C	ISO 11359-2
CLTE - Transverse	7.0E-5	cm/cm/°C	ISO 11359-2
RTI Elec (1.5 mm)	130	°C	UL 746
RTI Imp (1.5 mm)	125	°C	UL 746
RTI Str (1.5 mm)	130	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093

Disclaimer:

- The numerical values described in the data sheet are typical numerical values produced with a standard test method, and they do not guarantee the product's performance in a particular application.
- The flammability as described in the data sheet is an evaluation that resulted from a small-scale test, and it cannot be applied as it is to evaluate the actual risk of fire.
- Please contact us if you wish to use the product in medical equipment, food containers and packaging, and toys.
- If you wish to use various additives (antibacterial agents, stabilizers and flame retardants) or coloring agents with this resin, please consult with Teijin Ltd. beforehand. However, please note that Teijin Ltd. does not offer any kind of guarantee or bear any responsibility with regards to using this resin in any of these applications.
- The contents of the data sheet may change without notice.
- For other details, please see the Material Safety Data Sheet (MSDS) before use.
- Please contact the Resin & Plastic Processing Business Unit of Teijin Ltd. for detailed data.
- The raw materials used in our products may be subject to regulations depending on the type of system that exists to manage chemical substances in places to which our products are delivered. In addition, a separate application may need to be filed depending on the brand. There are also cases where imports of our products are not approved. If you are an importer or exporter and intend to import or export our products to new destinations, please make sure you contact us for details of regulatory compliance in those destinations.

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Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.5 mm		V-0	
3.2 mm		5VA	
Glow Wire Flammability Index			IEC 60695-2-12
1.5 mm	960	°C	
3.0 mm	960	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
1.5 mm	850	°C	
3.0 mm	850	°C	
Optical	Nominal Value	Unit	Test Method
Transmittance (3000 μm)	77.0	%	ASTM D1003

Notes

¹ Typical properties: these are not to be construed as specifications.

² 2.0 mm/min

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