

Lotte Chemical Corporation - Polycarbonate + ABS

Wednesday, June 28, 2023

General Information						
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Material Status	Commercial: Active					
Availability	Africa & Middle EastAsia Pacific	EuropeLatin America	North America			
Uses	 Automotive Applications 					
Automotive Specifications	 GM GMW15581P-ABS+P 	C-T7 • IMDS ID 119868758				

ASTI	M & ISO Properties 1		
Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity (Natural)	1.09		ASTM D792
Density (Natural)	1.09	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)			ASTM D1238
250°C/10.0 kg	35	g/10 min	
250°C/2.16 kg	4.0	g/10 min	
Melt Mass-Flow Rate (MFR)			ISO 1133
250°C/10.0 kg	35	g/10 min	
250°C/2.16 kg	4.0	g/10 min	
Molding Shrinkage - Flow (0.126 in)	4.0E-3 to 7.0E-3	in/in	ASTM D955
Molding Shrinkage - Across Flow (0.126 in)	4.0E-3 to 7.0E-3	in/in	ASTM D955
Molding Shrinkage			ISO 294-4
Across Flow: 0.0787 in	0.40 to 0.70	%	
Flow: 0.0787 in	0.40 to 0.70	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ²	276000	psi	ASTM D638
Tensile Modulus	271000	psi	ISO 527-1/50
Tensile Strength ² (Yield)	6970	psi	ASTM D638
Tensile Stress (Yield)	6820	psi	ISO 527-2/50
Tensile Strength ² (Break)	5690	psi	ASTM D638
Tensile Stress (Break)	3190	psi	ISO 527-2/50
Tensile Elongation ² (Break)	25	%	ASTM D638
Tensile Strain (Break)	22	%	ISO 527-2/50
Flexural Modulus ³	270000	psi	ASTM D790
Flexural Modulus ⁴	290000	psi	ISO 178
Flexural Strength ³	9530	psi	ASTM D790
Flexural Stress ⁴	10600	psi	ISO 178



Infino WP-1041

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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁵ (73°F)	22	ft-lb/in²	ISO 179/1eA
Notched Izod Impact			ASTM D256
-22°F, 0.125 in	8.2	ft-lb/in	
-22°F, 0.250 in	5.1	ft-lb/in	
73°F, 0.125 in	10	ft-lb/in	
73°F, 0.250 in	7.3	ft-lb/in	
Notched Izod Impact Strength ⁵ (73°F)	21	ft-lb/in²	ISO 180/1A
Unnotched Izod Impact Strength ⁵ (73°F)	17	ft-lb/in²	ISO 180/1U
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	103		ASTM D785
Rockwell Hardness (R-Scale)	103		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi, Unannealed, 0.252 in	248	°F	
Deflection Temperature Under Load			ISO 75-2/B
66 psi, Unannealed, 0.157 in	234	°F	
Deflection Temperature Under Load			ISO 75-2/B
66 psi, Annealed, 0.157 in	246	°F	
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed, 0.252 in	210	°F	
Deflection Temperature Under Load			ISO 75-2/A
264 psi, Unannealed, 0.157 in	199	°F	
Deflection Temperature Under Load			ISO 75-2/A
264 psi, Annealed, 0.157 in	225	°F	
Vicat Softening Temperature	230228	°F	ISO 306/B50
CLTE - Flow (104 to 212°F)	4.7E-5	in/in/°F	ASTM E831
CLTE - Flow (104 to 212°F)	4.7E-5	in/in/°F	ISO 11359-2
Proce	essing Information		
Injection	Nominal Value	Unit	
Drying Temperature			
Desiccant Dryer	194 to 212	°F	
Hot Air Dryer	194 to 212	°F	
Drying Time			
Desiccant Dryer	2.0 to 4.0	hr	
Hot Air Dryer	2.0 to 4.0	hr	
Suggested Max Moisture	< 0.020	%	
Rear Temperature	410 to 446	°F	
Middle Temperature	446 to 464	°F	
Front Temperature	464 to 509	°F	
Nozzle Temperature	464 to 518	°F	
Mold Temperature	140 to 194		
Injection Pressure	11400		



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Injection	Nominal Value	Unit
Back Pressure	71.1 to 284	psi
Screw Speed	50 to 150	rpm
Injection Notes		
Hot Runner Temperature: 240 to 270°C		

Notes

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

² 2.0 in/min

³ 0.11 in/min

⁴ 0.079 in/min

⁵ 4mm

