



CALIBRE™ 201-10

Trinseo - Polycarbonate Resin

Tuesday, November 5, 2019

General Information

Product Description

CALIBRE™ 201-10 is produced in compliance with the US Food and Drug Administration (FDA) and EU food contact regulations. It provides excellent impact resistance, heat distortion resistance and optical clarity. CALIBRE 201-10 product is formulated with mold release.

Govt. and Industry Standards:

- U.S. FDA 21 CFR 177.1580
- Underwriters Laboratory (UL)
- EU food contact 2011/10/EC

Applications:

- Food and processor housings
- Liquid containers
- Food utensils
- Packaging applications

General

Material Status	• Commercial: Active		
Availability	• Europe	• North America	
Additive	• Mold Release		
Features	• Food Contact Acceptable	• High Clarity	• High Impact Resistance
Uses	• Containers • Housings	• Kitchenware • Packaging	
Agency Ratings	• EU 2002/72/EC	• FDA 21 CFR 177.1580	
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183/A
Density	0.0434	lb/in ³	ISO 1183 ²
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10	g/10 min	ISO 1133
Melt volume-flow rate (300°C/1.2 kg)	8.00	cm ³ /10min	ISO 1133 ²
Molding Shrinkage - Flow	0.50 to 0.70	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	334000	psi	ISO 527-2/50
Tensile modulus	334000	psi	ISO 527-2 ²
Tensile Stress (Yield)	8700	psi	ISO 527-2/50
Tensile Stress (Yield)	8700	psi	ISO 527-2 ²
Tensile Stress (Break)	10300	psi	ISO 527-2/50
Tensile Strain (Yield)	6.0	%	ISO 527-2/50
Tensile Strain (Yield)	6.0	%	ISO 527-2 ²
Tensile Strain (Break)	150	%	ISO 527-2/50
Nominal strain at break	> 50	%	ISO 527-2 ²
Flexural Modulus ³	348000	psi	ISO 178

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Mechanical	Nominal Value	Unit	Test Method
Flexural Stress ³	14100	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy notched impact strength (73°F)	42.8	ft·lb/in ²	ISO 179/1eA ²
Charpy notched impact strength (-22°F)	6.19	ft·lb/in ²	ISO 179/1eA ²
Charpy impact strength (73°F)	No Break		ISO 179/1eU ²
Charpy impact strength (-22°F)	No Break		ISO 179/1eU ²
Notched Izod Impact Strength (73°F)	42	ft·lb/in ²	ISO 180/4A
Unnotched Izod Impact Strength (73°F)	No Break		ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Annealed)	291	°F	ISO 75-2/B
Deflection Temperature Under Load (66 psi)	293	°F	ISO 75-2 ²
Heat Deflection Temperature (264 psi, Unannealed)	257	°F	ISO 75-2/A
Heat Deflection Temperature (264 psi, Annealed)	286	°F	ISO 75-2/A
Deflection Temperature Under Load (264 psi)	268	°F	ISO 75-2 ²
Vicat Softening Temperature	300	°F	ISO 306/B50
Vicat Softening Temperature (50°C/h, B (50N))	300	°F	ISO 306 ²
Ball Indentation Temperature	257	°F	IEC 60335-1
CLTE - Flow	3.9E-5	in/in/°F	ISO 11359-2 ²
Electrical	Nominal Value	Unit	Test Method
Volume resistivity	> 3.9E+14	ohms·in	IEC 60093 ²
Electric strength	430	V/mil	IEC 60243-1 ²
Relative Permittivity (100 Hz)	3.00		IEC 60250 ²
Relative Permittivity (1 MHz)	3.00		IEC 60250 ²
Dissipation Factor (100 Hz)	1.0E-3		IEC 60250 ²
Dissipation Factor (1 MHz)	2.0E-3		IEC 60250 ²
Comparative Tracking Index (0.0787 in)	250	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating ⁴			UL 94
0.06 in	HB		
0.13 in	HB		
Burning Behav. at 1.6mm nom. thickn. (0.06 in, UL)	HB		ISO 1210 ²
Burning Behav. at thickness h (0.126 in, UL)	HB		ISO 1210 ²
Oxygen index	26	%	ISO 4589-2 ²
Optical	Nominal Value	Unit	Test Method
Transmittance	87.0 to 91.0	%	ASTM D1003

Notes

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

² Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

³ 0.079 in/min

⁴ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.