



CALIBRE™ 200-10

Trinseo - Polycarbonate Resin

Tuesday, November 5, 2019

General Information

Product Description

CALIBRE™ 200-10 Series are produced in compliance with the US Food and Drug Administration (FDA) and EU food contact regulations. They provide excellent impact resistance, heat distortion resistance and optical clarity. The CALIBRE 200-10 series products are available in 2 additive packages: CALIBRE 200: No mold release or UV Stabilizer. CALIBRE 201: 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	• Latin America	• North America
Features	• Food Contact Acceptable	• High Clarity	• High Impact Resistance
Uses	• Containers • Housings	• Kitchenware • Packaging	
Agency Ratings	• EU 2011/10/EC	• FDA 21 CFR 177.1580	
Automotive Specifications	• FORD ESF-M4D100-A1		
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

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Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus ³	348000	psi	ISO 178
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.