TRINSEO™

CALIBRE™ 200-15
Polycarbonate Resin

Overview

CALIBRE™ 200-15 polycarbonate resins 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 200-15 series products are available in 4 additive packages: CALIBRE 200: No mold release or UV Stabilizer. CALIBRE 201: Mold release. CALIBRE 202: UV stabilizer. CALIBRE 203: Mold release and UV stabilizer. (Note that CALIBRE 202 and 203 grades are not available in Europe and do not comply with EU food contact regulations).

Govt. and Industry Standards:

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

Applications:

- Food processors
- Beverages containers
- Food utensils
- Other packaging applications

Automotive Specifications

- GM GMP.PC.015

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	1.20	g/cm³	1.20	g/cm³	ASTM D792 ISO 1183/A
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15	g/10 min	15	g/10 min	ASTM D1238 ISO 1133
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3	in/in	0.50 to 0.70	%	ASTM D955 ISO 294-4
Water Absorption					
24 hr, 73°F (23°C)	0.15	%	0.15	%	ASTM D570
73°F (23°C), 24 hr	0.15	%	0.15	%	ISO 62
Equilibrium, 73°F (23°C), 50% RH	0.32	%	0.32	%	ASTM D570 ISO 62
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus					
-- [1]	340000	psi	2340	MPa	ASTM D638
--	334000	psi	2300	MPa	ISO 527-2/50
Tensile Strength					
Yield [1]	8700	psi	60.0	MPa	ASTM D638
Yield	8700	psi	60.0	MPa	ISO 527-2/50
Break [1]	10300	psi	71.0	MPa	ASTM D638
Break	10300	psi	71.0	MPa	ISO 527-2/50
Tensile Elongation					
Yield [1]	6.0	%	6.0	%	ASTM D638
Yield	6.0	%	6.0	%	ISO 527-2/50
Break [1]	150	%	150	%	ASTM D638
Break	150	%	150	%	ISO 527-2/50

Mechanical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Flexural Modulus					
-- [2]	350000	psi	2410	MPa	ASTM D790
-- [3]	348000	psi	2400	MPa	ISO 178
Flexural Strength					
-- [2]	14000	psi	96.5	MPa	ASTM D790
-- [3]	14100	psi	97.0	MPa	ISO 178
Taber Abrasion Resistance	45	%	45	%	ASTM D1044
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Notched Izod Impact					
73°F (23°C)	16	ft·lb/in	850	J/m	ASTM D256
73°F (23°C)	39	ft·lb/in²	83	kJ/m²	ISO 180/A
Unnotched Izod Impact (73°F (23°C))	No Break		No Break		ASTM D256 ISO 180
Instrumented Dart Impact [4]					ASTM D3763
73°F (23°C), Total Energy	770	in·lb	87.0	J	
Tensile Impact Strength	220	ft·lb/in²	462	kJ/m²	ASTM D1822
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Rockwell Hardness					ASTM D785
M-Scale	72		72		
R-Scale	118		118		
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Deflection Temperature Under Load					
66 psi (0.45 MPa), Annealed	289	°F	143	°C	ASTM D648 ISO 75-2/B
264 psi (1.8 MPa), Unannealed	260	°F	127	°C	ASTM D648
264 psi (1.8 MPa), Unannealed	261	°F	127	°C	ISO 75-2/A
264 psi (1.8 MPa), Annealed	284	°F	140	°C	ASTM D648 ISO 75-2/A
Vicat Softening Temperature	298	°F	148	°C	ISO 306/B50 ASTM D1525 [5]
Ball Indentation Temperature	257	°F	125	°C	IEC 60335-1
CLTE - Flow (-40 to 180°F (-40 to 82°C))	3.8E-5	in/in/°F	6.8E-5	cm/cm/°C	ASTM D696
Electrical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Volume Resistivity	2.0E+18	ohms·cm	2.0E+18	ohms·cm	ASTM D257
Dielectric Strength					
--	420	V/mil	17	kV/mm	ASTM D149
--	430	V/mil	17	kV/mm	IEC 60243-1
Dielectric Constant					ASTM D150
60 Hz	3.00		3.00		
1 MHz	3.00		3.00		
Dissipation Factor					ASTM D150
50 Hz	1.0E-3		1.0E-3		
1 MHz	2.0E-3		2.0E-3		
Comparative Tracking Index					IEC 60112
0.0787 in (2.00 mm), Solution A	250	V	250	V	
Flammability	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Flame Rating [6]					UL 94
0.06 in (1.6 mm)	HB		HB		
0.13 in (3.2 mm)	HB		HB		
Glow Wire Ignition Temperature [6]					IEC 60695-2-13
0.08 in (2.0 mm), 5.0 sec	1560	°F	850	°C	
Oxygen Index [6]	26	%	26	%	ISO 4589-2
Average Extent of Burning	1	in	3	cm	ASTM D635

[HongKong] +852-69575415 [China GuangDong] +135-3858-6433 [China ShangHai] +188-1699-6168

Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Refractive Index	1.586	1.586	ASTM D542 ISO 489
Transmittance	89.0 %	89.0 %	ASTM D1003
Haze	1.0 %	1.0 %	ASTM D1003