



CALIBRE™ 301EP-22

Trinseo - Polycarbonate Resin

Tuesday, November 5, 2019

General Information

Product Description

CALIBRE™ 300EP-22 Series are polycarbonate resins that offer exceptional impact resistance, heat distortion resistance, and optical clarity for injection molding applications. Their high melt flow rate allows complex parts to be easily molded. The CALIBRE 300EP-22 series products are available in 4 additive packages: CALIBRE 300EP: No mold release or UV Stabilizer. CALIBRE 301EP: Mold release. CALIBRE 302EP: UV stabilizer. CALIBRE 303EP: Mold release and UV stabilizer.

Govt. and Industry Standards:

- CSA (Canadian Standards Association)
- Underwriters Laboratory, Inc. (UL)

Applications:

- Appliances
- Storage
- Electrical components
- Light diffusers

General

Material Status	• Commercial: Active		
Availability	• Europe	• Latin America	• North America
Additive	• Mold Release		
Features	• High Clarity	• High Flow	• High Impact Resistance
Uses	• Appliances	• Electrical/Electronic Applications	
Agency Ratings	• CSA Unspecified Rating		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183/B
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	22	g/10 min	ISO 1133
Molding Shrinkage - Flow	0.50 to 0.70	%	ISO 294-4
Water Absorption (24 hr, 73°F)	0.15	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.32	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	334000	psi	ISO 527-2/50
Tensile Stress (Yield)	8700	psi	ISO 527-2/50
Tensile Stress (Break)	9430	psi	ISO 527-2/50
Tensile Strain (Yield)	6.0	%	ISO 527-2/50
Tensile Strain (Break)	120	%	ISO 527-2/50
Flexural Modulus ²	348000	psi	ISO 178
Flexural Stress ²	14100	psi	ISO 178
Taber Abrasion Resistance	45	%	ISO 9352
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	9.5	ft-lb/in ²	ISO 179/1eA
Notched Izod Impact Strength (73°F)	35	ft-lb/in ²	ISO 180/A

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Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ISO 2039-2
M-Scale	73		
R-Scale	118		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Annealed)	288	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	252	°F	ISO 75-2/A
Heat Deflection Temperature (264 psi, Annealed)	282	°F	ISO 75-2/A
Vicat Softening Temperature	297	°F	ISO 306/B50
Ball Indentation Temperature	> 257	°F	IEC 60335-1
CLTE - Flow	3.8E-5	in/in/°F	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength	430	V/mil	IEC 60243-1
Dielectric Constant			IEC 60250
60 Hz	3.00		
1 MHz	3.00		
Relative Permittivity			IEC 60250
100 Hz	3.00		
1 MHz	3.00		
Dissipation Factor			IEC 60250
50 Hz	1.0E-3		
1 MHz	2.0E-3		
Comparative Tracking Index (0.0787 in, Solution A)	250	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating ³			UL 94
0.06 in	V-2		
0.12 in	V-2		
Glow Wire Flammability Index ³			IEC 60695-2-12
0.04 in	1650	°F	
0.08 in	1610	°F	
0.12 in	1610	°F	
Glow Wire Ignition Temperature ³			IEC 60695-2-13
0.04 in	1470	°F	
0.08 in	1430	°F	
0.12 in	1430	°F	
Oxygen Index ³	26	%	ISO 4589-2
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.586		ISO 489
Transmittance	89.0	%	ASTM D1003
Haze	1.00	%	ASTM D1003

Notes

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

² 0.079 in/min

³ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.