TRINSEO™

CALIBRE™ 303-22
Polycarbonate Resin

Overview

CALIBRE™ 303-22 Polycarbonate resin offers exceptional impact resistance and heat distortion resistance. The material contains UV stabilizer and mold release and is offered in transparent and other customized colors.

Govt. and Industry Standards
- Underwriters Laboratory, inc (UL)

Applications:
- Appliances;
- Automotive Applications;
- Business Equipment;
- Consumer Applications
- Displays
- Electrical/Electronic Applications
- Household Goods
- Lighting Applications
- Rigid Packaging
- Transparent Parts

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	1.20	g/cm³	1.20	g/cm³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	22	g/10 min	22	g/10 min	ASTM D1238 ISO 1133
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3	in/in	0.50 to 0.70	%	ISO 294-4
Water Absorption					ISO 62
Saturation, 73°F (23°C)	0.32	%	0.32	%	
Equilibrium, 73°F (23°C), 50% RH	0.12	%	0.12	%	
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus					
-- [1]	334000	psi	2300	MPa	ASTM D638
--	334000	psi	2300	MPa	ISO 527-1/1
Tensile Strength					
Yield [2]	8700	psi	60.0	MPa	ASTM D638
Yield	8700	psi	60.0	MPa	ISO 527-2/50
Break [2]	9430	psi	65.0	MPa	ASTM D638
Break	9430	psi	65.0	MPa	ISO 527-2/50
Tensile Elongation					
Yield [2]	6.0	%	6.0	%	ASTM D638
Yield	6.0	%	6.0	%	ISO 527-2/50
Break [2]	120	%	120	%	ASTM D638
Break	120	%	120	%	ISO 527-2/50
Flexural Modulus					
--	350000	psi	2410	MPa	ASTM D790
-- [3]	348000	psi	2400	MPa	ISO 178
Flexural Strength					
--	14000	psi	96.5	MPa	ASTM D790
-- [3]	14100	psi	97.0	MPa	ISO 178

Impact	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Charpy Notched Impact Strength					ISO 179/1eA
-22°F (-30°C)	5.2	ft·lb/in²	11	kJ/m²	
73°F (23°C)	9.5	ft·lb/in²	20	kJ/m²	
Notched Izod Impact					
73°F (23°C)	14	ft·lb/in	750	J/m	ASTM D256
73°F (23°C)	35	ft·lb/in²	74	kJ/m²	ISO 180/1A
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Rockwell Hardness					ASTM D785
M-Scale	73		73		
R-Scale	118		118		
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Deflection Temperature Under Load					
66 psi (0.45 MPa), Annealed	288	°F	142	°C	ASTM D648 ISO 75-2/B
264 psi (1.8 MPa), Unannealed	259	°F	126	°C	ASTM D648
264 psi (1.8 MPa), Unannealed	252	°F	122	°C	ISO 75-2/A
264 psi (1.8 MPa), Annealed	282	°F	139	°C	ASTM D648 ISO 75-2/A
Vicat Softening Temperature	297	°F	147	°C	ISO 306/B50 ASTM D1525 [4]
CLTE - Flow (-40 to 176°F (-40 to 80°C))	3.8E-5	in/in/°F	6.8E-5	cm/cm/°C	ISO 11359-2
Electrical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Dielectric Strength	430	V/mil	17	kV/mm	ASTM D149
Dissipation Factor					ASTM D150
50 Hz	1.0E-3		1.0E-3		
1 MHz	2.0E-3		2.0E-3		
Flammability	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Glow Wire Flammability Index [5]					IEC 60695-2-12
0.04 in (1.0 mm)	1650	°F	900	°C	
0.08 in (2.0 mm)	1610	°F	875	°C	
0.12 in (3.0 mm)	1610	°F	875	°C	
Glow Wire Ignition Temperature [5]					IEC 60695-2-13
0.04 in (1.0 mm)	1470	°F	800	°C	
0.08 in (2.0 mm)	1430	°F	775	°C	
0.12 in (3.0 mm)	1430	°F	775	°C	
Oxygen Index [5]	26	%	26	%	ISO 4589-2
Optical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Light Transmittance [6]	89.0	%	89.0	%	ASTM D1003
Haze [6]	1.0	%	1.0	%	ASTM D1003

Injection	Nominal Value	(English)	Nominal Value	(SI)
Drying Temperature	248	°F	120	°C
Drying Time	4.0	hr	4.0	hr