



CALIBRE™ 301 HMR FC030003

Trinseo - Polycarbonate Resin

Tuesday, November 5, 2019

General Information

Product Description

CALIBRE™ 301 HMR FC030003 Polycarbonate resin offers exceptional impact resistance, heat distortion resistance, and optical clarity. CALIBRE 301 HMR also has a mold release package designed to improve processing larger more complex injection molded parts.

Applications:

- Small & large appliances

General

Material Status	• Commercial: Active
Availability	• North America
Additive	• Mold Release
Features	• High Clarity • High Impact Resistance
Uses	• Appliances
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)	19	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)	10300	psi	ISO 527-2/50
Tensile Strain (Yield)	6.0	%	ISO 527-2/50
Tensile Strain (Break)	150	%	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			ISO 179/1eA
-22°F	5.7	ft·lb/in ²	
73°F	12	ft·lb/in ²	
Notched Izod Impact Strength (73°F)	39	ft·lb/in ²	ISO 180/A
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)	289	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	255	°F	ISO 75-2/A

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Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Annealed)	284	°F	ISO 75-2/A
Vicat Softening Temperature	298	°F	ISO 306/B50
Ball Indentation Temperature	> 257	°F	IEC 60335-1
CLTE - Flow	3.9E-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
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