CALIBRE™ 701-15

Polycarbonate Resin

Trinseo

Message:

CALIBRE™ 701-15 Series resins are formulated and produced to supply both clarity and enhanced ignition resistance. They do so while maintaining excellent physical properties and processability. The CALIBRE 701-15 series products are available in 2 additive packages: CALIBRE 701: Mold release. CALIBRE 703: Mold release and UV stabilizer.
Main Characteristics
Underwriters Laboratory Inc. (UL)
Applications:
Industrial switches
Circuit breakers
Plugs, socket and switches
Street lights
Safety lights
Reflectors

General Information			
UL YellowCard	E54680-469978	E206114-228280	
Additive	Mold Release		
Features	Flame Retardant Good Processability High Clarity		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density			
--	1.20	g/cm³	ISO 1183/A
--	1200	kg/m³	ISO 1183 [1]
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15	g/10 min	ISO 1133
Melt volume-flow rate (300°C/1.2 kg)	12.0	cm³/10min	ISO 1133 [2]
Molding Shrinkage - Flow	0.50 to 0.70	%	ISO 294-4
Water Absorption			ISO 62 [3]
Saturation	0.030	%	
Equilibrium	0.23	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2300	MPa	ISO 527-2/50, ISO 527-2 3 [4]
Tensile Stress			
Yield	60.0	MPa	ISO 527-2/50, ISO 527-2 [5]
Break	66.0	MPa	ISO 527-2/50
Tensile Strain			
Yield	6.0	%	ISO 527-2/50, ISO 527-2 [6]

Break	120	%	ISO 527-2/50
Nominal strain at break	> 50	%	ISO 527-2 [7]
Flexural Modulus	2400	MPa	ISO 178
Flexural Stress	100	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			
23°C	20	kJ/m²	ISO 179/1eA
-30°C	15.0	kJ/m²	ISO 179/1eA [8]
23°C	17.0	kJ/m²	ISO 179/1eA [9]
Charpy impact strength			ISO 179/1eU [10]
-30°C	No Break		
23°C	No Break		
Notched Izod Impact Strength (23°C)	83	kJ/m²	ISO 180/A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, Annealed	142	°C	ISO 75-2/B
0.45 MPa	140	°C	ISO 75-2 [11]
1.8 MPa, Unannealed	122	°C	ISO 75-2/A
1.8 MPa, Annealed	139	°C	ISO 75-2/A
1.8 MPa	122	°C	ISO 75-2 [12]
Vicat Softening Temperature			
--	147	°C	ISO 306/B50
50°C/h, B (50N)	147	°C	ISO 306 [13]
Ball Indentation Temperature	125	°C	IEC 60335-1
Electrical	**Nominal Value**	**Unit**	**Test Method**
Comparative Tracking Index			
2.00 mm, Solution A	250	V	IEC 60112
--	250		IEC 60112 [14]
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating [15]			UL 94
1.60 mm	V-2		
3.20 mm	V-0		
Burning Behav. at 1.6mm nom. thickn. (1.60 mm, UL)	V-2		ISO 1210 [16]
Burning Behav. at thickness h (3.20 mm, UL)	V-0		ISO 1210 [17]
NOTE			
1.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		
2.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		

3.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
4.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
5.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
6.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
7.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
8.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
9.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
10.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
11.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
12.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
13.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
14.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
15.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.
16.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
17.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

Recommended distributors for this material

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