

General Information
Product Description

CALIBRE™ 701-10 resin is formulated and produced to supply both clarity and enhanced ignition resistance. They do so while maintaining excellent physical properties and processability. CALIBRE 701-10 contains mold release.

Main Characteristics:

- Underwriters Laboratory Inc. (UL)

Applications:

- Industrial switches
- Circuit breakers
- Plugs, sockets and switches
- Street lights
- Safety lights
- Reflectors

General

Material Status	<ul style="list-style-type: none"> • Commercial: Active
Availability	<ul style="list-style-type: none"> • Europe • North America
Test Standards Available	<ul style="list-style-type: none"> • ISO • ISO 10350
Additive	<ul style="list-style-type: none"> • Ignition Resistant • Mold Release
Features	<ul style="list-style-type: none"> • Flame Retardant
Agency Ratings	<ul style="list-style-type: none"> • UL 94
Forms	<ul style="list-style-type: none"> • Pellets
Processing Method	<ul style="list-style-type: none"> • Injection Molding

ASTM and ISO Properties ¹

Physical	Nominal Value Unit	Test Method
Density (Method A)	1.20 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10 g/10 min	ISO 1133
Molding Shrinkage (Flow)	0.50 to 0.70 %	ISO 294-4
Mechanical	Nominal Value Unit	Test Method
Tensile Modulus ²	334000 psi	ISO 527-1, -2
Tensile Stress at Yield ²	8700 psi	ISO 527-1, -2
Tensile Stress at Break ²	9570 psi	ISO 527-1, -2
Tensile Strain at Yield ²	6.0 %	ISO 527-1, -2
Tensile Strain at Break ²	120 %	ISO 527-1, -2
Flexural Modulus ³	348000 psi	ISO 178
Flexural Strength ³	14500 psi	ISO 178
Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength (73 °F) ⁴	14.3 ft-lb/in ²	ISO 179
Notched Izod Impact Strength (73 °F)	41.9 ft-lb/in ²	ISO 180
Thermal	Nominal Value Unit	Test Method
HDT B (0.45 MPa) Annealed	291 °F	ISO 75B-1, -2
HDT A (1.80 MPa) Unannealed	253 °F	ISO 75A-1, -2
HDT A (1.80 MPa) Annealed	284 °F	ISO 75A-1, -2
Vicat Softening Temperature (B50 (50°C/h 50 N))	300 °F	ISO 306



CALIBRE™ 701-10
Dow Plastics - Polycarbonate

Ball Indent Temp	253 °F	IEC 60598-1
Electrical	Nominal Value Unit	Test Method
Comp Track Index (0.0787 in, Solution A)	250 V	IEC 60112
Flammability	Nominal Value Unit	Test Method
Flame Rating - UL (0.0630 in) (0.126 in)	V-2 V-0	UL 94

CAMPUS® Properties ⁵

Rheological properties	Nominal Value Unit	Test Method
Melt volume-flow rate (300°C/1.2 kg)	0.488 in ³ /10min	ISO 1133
Mechanical properties 23°C/50%r.h.	Nominal Value Unit	Test Method
Tensile modulus	334000 psi	ISO 527-1, -2
Yield stress	8700 psi	ISO 527-1, -2
Yield strain	6.0 %	ISO 527-1, -2
Nominal strain at break	> 50.0 %	ISO 527-1, -2
Charpy impact strength (+23°C)	No Break ft-lb/in ²	ISO 179 /1eU
Charpy impact strength (-30°C)	No Break ft-lb/in ²	ISO 179 /1eU
Charpy notched impact strength (+23°C)	8.09 ft-lb/in ²	ISO 179 /1eA
Charpy notched impact strength (-30°C)	7.14 ft-lb/in ²	ISO 179 /1eA
Thermal properties	Nominal Value Unit	Test Method
Temp. of deflection under load (1.80 MPa)	253 °F	ISO 75-1, -2
Temp. of deflection under load (0.45 MPa)	284 °F	ISO 75-1, -2
Vicat softening temperature (50°C/h 50N)	300 °F	ISO 306
Burning Behav. at 1.6mm nom. thickn. (0.06 in, UL)	V-2	ISO 1210
Burning Behav. at thickness h (0.126 in, UL)	V-0	ISO 1210
Electrical properties 23°C/50%r.h.	Nominal Value Unit	Test Method
Comparative tracking index	250	IEC 60112
Other properties	Nominal Value Unit	Test Method
Water absorption	0.030 %	ISO 62
Humidity absorption	0.23 %	ISO 62
Density	0.0434 lb/in ³	ISO 1183
Test specimen production	Nominal Value Unit	Test Method
Processing conditions acc. ISO	ISO 7391-2	
Injection Molding, melt temperature	572 °F	ISO 294
Injection Molding, mold temperature	194 °F	ISO 10724
Injection Molding, injection velocity	8 in/sec	ISO 294

Notes

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

² 2.0 in/min

³ 0.079 in/min

⁴ Type 1, Edgewise, Notch A

⁵ Typical properties: these are not to be construed as specifications. Additional CAMPUS® data and disclaimer information may be found on CAMPUS® Data Sheet.

