



Micro Partes
de México S.A. de C.V.
Plastic Injection Molding

POLYCARBONATE (PC) **CALIBRE 303 10 TNT**

Dow Plastics - Calibre 303 10 TNT Polycarbonate

Polycarbonate is one of the toughest, most dimensionally stable thermoplastics over a wide temperature range. Polycarbonate has exceptionally high impact strength. Polycarbonate is unaffected by water below 140°F and can be used in boiling water on a limited basis. Polycarbonate is unaffected by greases, oils detergents, aliphatic hydrocarbons, most mineral acids, and the higher alcohols. It is attacked by chlorinated hydrocarbons, and most aromatic solvents, esters, and ketones. Polycarbonate has a blue tinted transparency with a 89% light transmission.

APPLICATIONS

Fasteners - Washers - Spacers - Lenses - Housings.

PRODUCT DESCRIPTION

CALIBRE 300 series resins are general purpose, UL listed polycarbonate resins. CALIBRE 300 series resins exhibit an excellent physical property balance of heat resistance, and impact strength.

Properties

Physical	Nominal Values (English)	Test Method
Density - Specific Gravity (g/cc)	1.20 sp gr	ASTM D792
Melt Flow Rate (300°C/1.2 kg-O)	10 g/10 min	ASTM D1238
Mold Shrink, Linear - Flow	0.0050 to 0.0070 in/in	ASTM D955
Moisture Absorption @ Equil (50%RH, 73°F)	0.32 %	ASTM D570
Water Absorption @ 24 hrs (73°F)	0.15 %	ASTM D570

Mechanical

	Nominal Values (English)	Test Method
Tensile Modulus (2 in/min)	350,000 psi	ASTM D638
Yield Stress	8,700 psi	ASTM D638
Ultimate Tensile Strength	10,300 psi	ASTM D638
Elongation @ Break	150 %	ASTM D638
Flexural Modulus	350,000 psi	ASTM D790
Flexural Strength	14,000 psi	ASTM D790

Impact

	Nominal Values (English)	Test Method
Notched izod Impact (73°F, 0.125 in)	17.00 ft-lb/in	ASTM D256
Unnotched Izod Impact (73°F)	No Break ft-lb/in	ASTM D256
Instrumented Dart Impact @73°F (0.125 in; 8,000 ipm)	Total Energy: 770 in/lb	ASTM D3763

Tensile Impact Strength (73°F, Type S)	250 ft-lb/in	ASTM D1822
Hardness	Nominal Values (English)	Test Method
Rockwell Hardness (R-Scale)	118	ASTM D785
Taber Abrasion Resistance (0.125 in, Haze)	45 %	ASTM 1044
Thermal	Nominal Values (English)	Test Method
DTUL @264psi - Annealed (0.157 in)	286 °F	ASTM D648
DTUL @264psi - Unannealed (0.125 in)	262 °F	ASTM D648
DTUL @66psi - Annealed (0.157 in)	291 °F	ASTM D648
Vicat Softening Point	300 °F	ASTM D1525
CLTE, Flow (-40°F to 180°F)	38 x 10 ⁻⁶	ASTM D696
Electrical	Nominal Values (English)	Test Method
Volume Resistivity @ 73°F Dry	2.0 x 10 ¹⁷ ohm-cm	ASTM D257
Dielectric Strength	420 V/mil	ASTM D149
Dielectric Constant (60 Hz)	3.0	ASTM D1507
Dielectric Constant (1, MHz)	3.0	ASTM D1507
Dissipation Factor (60 Hz)	0.001	ASTM D150
Dissipation Factor (1 MHz)	0.002	ASTM D150
Ignition Characteristics	Nominal Values (English)	Test Method
Flame Rating - UL (0.0625 in)	HB	UL 94
Flame Rating - UL (0.125 in)	HB	UL 94
Limiting Oxygen Index	26 %	ASTM D2863
Average Extent of Burning	1 in	ASTM D635
Optical	Nominal Values (English)	Test Method
Refractive Index	1.586 n _D	ASTM D542
Light Transmission	89.0 %	ASTM D1003
Haze	1.0 %	ASTM D1003
Rheological	Nominal Values (English)	Test Method
Melt Flow Rate	10 g/10min	ASTM D1238