UNICAR® Unfilled PC

Polycarbonate

Nytef Plastics, Ltd.

Message:

UNICAR Polycarbonate is a transparent thermoplastic that exhibits extraordinary impact resistance and excellent electrical properties. In addition, its low moisture absorption rate and good chemical resistance make it an extremely versatile engineering material and allows for its use in a multitude of industrial applications. Unfilled UNICAR Polycarbonate is a mechanical grade material with light transmittance of approximately 88%.
For applications requiring additional stiffness, glass fiber filled UNICAR Rg is available with fiber filler levels ranging from 10% to 40%. Nytef Plastics stocks UNICAR and UNICAR Rg Polycarbonate products in a full range of heavy gauge rod, plate and tubular bar sizes.
PRODUCT ATTRIBUTES
265°F continuous use temperature
Transparent
Excellent toughness
Low moisture absorption
Superior electrical properties
Excellent UV resistance
Easily machined and fabricated
Glass fiber filled grades for improved strength and stiffness
INDUSTRIES
Aircraft and aerospace
Fluid handling
Electrical and electronics products
Automotive
Business machines
APPLICATIONS
Electrical component housings
Electrical insulators
Aircraft instrumentation
Sight glasses
Manifolds

General Information	
Features	Good Chemical Resistance
	Good Electrical Properties
	Good Impact Resistance
	Good Toughness
	Good UV Resistance
	High Clarity
	Low Moisture Absorption
	Machinable
Uses	Aerospace Applications
	Aircraft Applications
	Aircraft Interiors
	Automotive Applications
	Business Equipment
	Electrical Housing
	Electrical Parts

	Electrical/Electronic Applications
	Eyeglasses

Appearance	Clear/Transparent
Forms	Preformed Parts
	Rod

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm³	ASTM D792
Water Absorption			ASTM D570
24 hr	0.15	%	
Saturation	0.35	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			ASTM D785
M-Scale	70		
R-Scale	118		
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2280	MPa	ASTM D638
Tensile Strength	65.5	MPa	ASTM D638
Tensile Elongation (Break)	110	%	ASTM D638
Flexural Modulus	2340	MPa	ASTM D790
Flexural Strength	93.1	MPa	ASTM D790
Compressive Strength	86.2	MPa	ASTM D695
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact	91	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed)	132	°C	ASTM D648
Continuous Use Temperature	129	°C	UL 746
CLTE - Flow	6.8E-5	cm/cm/°C	ASTM D696
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	> 1.0E+17	ohms·cm	ASTM D257
Dielectric Strength [1]	15	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
1 MHz	2.96		
60 MHz	3.17		
Dissipation Factor (60 Hz)	9.0E-4		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating	HB		UL 94
NOTE			
1.	Method A (Short-Time)		

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China