

Product Texts

ELCRIN ML4412B resin is a 20% glass fiber reinforced Polycarbonate Copolymer, medium flow, impact modified, injection moldable grade with partial component synthesized from Bio source. ELCRIN ML4412B is available in opaque colors only and is an excellent candidate for a broad range of applications that require a combination of stiffness, ductility and good chemical resistance.

UL Yellow Card [E207780-104298581](https://www.ulprospector.com/usa/Products/Plastics/PC-GF20)

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	10	cm ³ /10min	ISO 1133
Temperature	300	°C	-
Load	1.2	kg	-
ASTM Data			
Melt Flow Index, MFI	11	g/10min	ASTM D 1238
Temperature	300	°C	-
Load	1.2	kg	-
Mold Shrinkage, MD	0.0025	mm/mm	ASTM D 955
Mold Shrinkage, TD	0.0045	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	6500	MPa	ISO 527
Stress at break	110	MPa	ISO 527
Strain at break	3	%	ISO 527
Flexural modulus, 23°C	5700	MPa	ISO 178
Flexural strength	165	MPa	ISO 178
Charpy notched impact strength, +23°C	17	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	12	kJ/m ²	ISO 179/1eA
Izod notched impact strength, +23°C	17	kJ/m ²	ISO 180/1A
Izod notched impact strength	12	kJ/m ²	ISO 180/1A
Temperature	-30	°C	-
ASTM Data			
Tensile Modulus	6300	MPa	ASTM D 638
Tensile Strength at Break	100	MPa	ASTM D 638
Elongation at Break	3	%	ASTM D 638
Flexural Modulus	5800	MPa	ASTM D 790
Flexural Strength	160	MPa	ASTM D 790
Izod Impact notched, 1/8 in	140	J/m	ASTM D 256
Izod Impact unnotched, 1/8 in	700	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	133	°C	ISO 75-1/-2
Vicat softening temperature, B	142	°C	ISO 306
ASTM Data			
UL 94 Flame rating	HB	-	UL 94
Thickness tested	0.4	mm	-
Coefficient of Thermal Expansion, MD	26	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	68	E-6/K	ASTM D 696
DTUL @ 66 psi	135	°C	ASTM D 648
DTUL @ 264 psi	132	°C	ASTM D 648

Other properties	Value	Unit	Test Standard
Water absorption	0.1	%	Sim. to ISO 62
Humidity absorption	0.03	%	Sim. to ISO 62
Density	1330	kg/m ³	ISO 1183
Density	1330	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	110	°C	-
Pre-drying - Time	3 - 6	h	-
Processing humidity	≤0.02	%	-
Melt temperature	285 - 310	°C	-
Mold temperature	80 - 110	°C	-
Zone 1	260 - 280	°C	-
Zone 2	270 - 290	°C	-
Zone 3	280 - 300	°C	-
Nozzle temperature	285 - 305	°C	-
Screw speed	50 - 90	rpm	-
Back pressure	0.1 - 0.3	MPa	-

Characteristics

Processing

Injection Molding

Special Characteristics

High impact or impact modified, Opaque

Features

Ductile, Copolymer

Chemical Resistance

General Chemical Resistance

Certifications

Contains renewable resources

Applications

IT / Business Machine, Electrical and Electronical

Regional Availability

North America, Europe, Asia Pacific, South and Central America