

**Product Texts**

ELCRIN EXL1414TB polycarbonate (PC) siloxane copolymer is transparent injection molding grade with major component synthesized from Bio source. This resin offers extreme low temperature (-40 degrees) ductility in combination with medium flow characteristics and excellent processability with opportunities for shorter IM cycle times compared with standard PC. ELCRIN EXL1414TB resin is a general purpose product available in transparent and opaque colors and is an excellent candidate for a broad range of applications.

UL Yellow Card [E207780-314453](https://www.ulprospector.com/PC/properties/ELCRIN-EXL1414TB)

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ISO Data</b>			
Melt volume-flow rate, MVR	9	cm <sup>3</sup> /10min	ISO 1133
Temperature	300	°C	-
Load	1.2	kg	-
<b>ASTM Data</b>			
Melt Flow Index, MFI	10	g/10min	ASTM D 1238
Temperature	300	°C	-
Load	1.2	kg	-
Mold Shrinkage, MD	0.006	mm/mm	ASTM D 955
Mold Shrinkage, TD	0.006	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Tensile Modulus	2300	MPa	ISO 527
Yield stress	56	MPa	ISO 527
Yield strain	5.4	%	ISO 527
Stress at break	55	MPa	ISO 527
Strain at break	108	%	ISO 527
Flexural modulus, 23°C	2120	MPa	ISO 178
Flexural strength	88	MPa	ISO 178
Charpy impact strength, +23°C	N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	N	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C	70	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	60	kJ/m <sup>2</sup>	ISO 179/1eA
Izod impact strength, +23°C	N	kJ/m <sup>2</sup>	ISO 180/1U
Izod notched impact strength, +23°C	65	kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength	55	kJ/m <sup>2</sup>	ISO 180/1A
Temperature	-30	°C	-
Rockwell hardness	L 87	-	ISO 2039-2
<b>ASTM Data</b>			
Tensile Modulus	2180	MPa	ASTM D 638
Tensile Strength at Yield	57	MPa	ASTM D 638
Tensile Strength at Break	59	MPa	ASTM D 638
Elongation at Yield	5.6	%	ASTM D 638
Elongation at Break	124	%	ASTM D 638
Flexural Modulus	2180	MPa	ASTM D 790
Flexural Strength	90	MPa	ASTM D 790
Izod Impact notched, 1/8 in	820	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	710	J/m	ASTM D 256
Temperature	-30	°C	-

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Temp. of deflection under load, 1.80 MPa	116	°C	ISO 75-1/-2
Vicat softening temperature, B	138	°C	ISO 306
Coeff. of linear therm. expansion, parallel	67	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	80	E-6/K	ISO 11359-1/-2
Burning behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.4	mm	-

Yellow Card available	yes	-	-
<b>ASTM Data</b>			
UL 94 Flame rating	V-2	-	UL 94
Thickness tested	3	mm	-
Coefficient of Thermal Expansion, MD	67	E-6/K	ASTM D 696
Coefficient of Thermal Expansion, TD	80	E-6/K	ASTM D 696
DTUL @ 264 psi	120	°C	ASTM D 648
Vicat Temperature	138	°C	ASTM D 1525

Other properties	Value	Unit	Test Standard
Water absorption	0.12	%	Sim. to ISO 62
Humidity absorption	0.09	%	Sim. to ISO 62
Density	1190	kg/m <sup>3</sup>	ISO 1183
Density	1190	kg/m <sup>3</sup>	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	120	°C	-
Pre-drying - Time	3 - 4	h	-
Processing humidity	≤0.02	%	-
Melt temperature	295 - 315	°C	-
Mold temperature	70 - 95	°C	-
Zone 1	270 - 295	°C	-
Zone 2	280 - 305	°C	-
Zone 3	295 - 315	°C	-
Nozzle temperature	290 - 310	°C	-

## Characteristics

### Processing

Injection Molding

### Additives

Release agent

### Special Characteristics

High impact or impact modified, Transparent, Opaque

### Features

Amorphous, Ductile, Copolymer

### Chemical Resistance

General Chemical Resistance

### Certifications

Contains renewable resources

### Applications

Automotive, IT / Business Machine, Electrical and Electronical

### Regional Availability

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