

ELIX PC/ABS 5130

PC/ABS blend, injection molding grade that poses a good combination of impact, stiffness and toughness. Vicat B120 = 130°C

Major Benefits

- . Easy flow
- . Very high impact up to -40°C
- . Low emission grade
- . UV stabilized grade
- . Good stability even with high humidity conditions
- . Low shrinkage
- . Good paintability
- . Thin-walled parts

Chemical composition

Thermoplastic polymer blend based on polycarbonate (PC) and acrylonitrile-butadienestyrene (ABS).

Physical form

White to slightly yellowish pellets.

Handling information

Please see the Material Safety Data Sheet for relevant health & safety information.



Typical properties¹

Vicat softening temperature Deflection temperature under load Deflection temperature under load CLTE, parallel CLTE, transverse Burning behavior UL 94 Burning rate (US-FMVSS) Other properties (23°C) Density Water absorption (saturation value) Water absorption (equilibrium value) Emission properties² VOC total emission 1.80 M 2.30 to 5	120°C/h	IPa IPa IPa IPa IPa IPa IPa IJ/m2 J/m2 J/m2 CC	ISO 1133 ISO 294-4 ISO 294-4 ISO 527-1,2 ISO 527-1,2 ISO 527-1,2 ISO 527-1,2 ISO 178 ISO 178 ISO 180-1A ISO 180-1A ISO 306 ISO 306 ISO 75-1,2	21 0.65-0.75 0.65-0.75 55 4.7 70 2300 2280 85 53 39 30 130 128
Melt volume-flow rate Molding shrinkage, parallel Molding shrinkage, normal Mechanical properties (23°C /50% H.R.) Yield stress Yield strain Elongation at break Tensile modulus Flexural modulus Flexural strength Izod notched impact strength B120, Vicat softening temperature Vicat softening temperature B120, Vicat softening temperature Deflection temperature under load Deflection temperature under load CLTE, parallel CLTE, transverse Burning behavior UL 94 Burning rate (US-FMVSS) Other properties (23°C) Density Water absorption (saturation value) Water Water absorption (equilibrium value) Emission properties² VOC total emission	120°C/h	IPa IPa IPa IPa IPa IPa IPa IJ/m2 J/m2 J/m2 CC	ISO 294-4 ISO 294-4 ISO 527-1,2 ISO 527-1,2 ISO 527-1,2 ISO 527-1,2 ISO 178 ISO 178 ISO 180-1A ISO 180-1A ISO 180-1A	0.65-0.75 0.65-0.75 55 4.7 70 2300 2280 85 53 39 30 130 128
Molding shrinkage, parallel Molding shrinkage, normal Mechanical properties (23°C /50% H.R.) Yield stress Yield strain Elongation at break Tensile modulus Flexural modulus Flexural strength Izod notched impact strength Thermal properties Vicat softening temperature Vicat softening temperature B120, Vicat softening temperature B50, 5 Deflection temperature under load Deflection temperature under load CLTE, parallel CLTE, transverse Burning behavior UL 94 Burning rate (US-FMVSS) Other properties (23°C) Density Water absorption (saturation value) Water Water absorption (equilibrium value) Z3°C, 5 Emission properties² VOC total emission	120°C/h	IPa IPa IPa IPa IPa IPa IJ/m2 IJ/m2 IJ/m2 IJ/m2 IJ/m2	ISO 294-4 ISO 527-1,2 ISO 527-1,2 ISO 527-1,2 ISO 527-1,2 ISO 178 ISO 178 ISO 180-1A ISO 180-1A ISO 180-1A ISO 306 ISO 306	0.65-0.75 55 4.7 70 2300 2280 85 53 39 30 130 128
Molding shrinkage, normal Mechanical properties (23°C /50% H.R.) Yield stress Yield strain Elongation at break Tensile modulus Flexural modulus Flexural strength Izod notched impact strength Thermal properties Vicat softening temperature Vicat softening temperature B120, Vicat softening temperature B50, 50 Deflection temperature under load CLTE, parallel CLTE, transverse Burning behavior UL 94 Burning rate (US-FMVSS) Other properties (23°C) Density Water absorption (saturation value) Water Water absorption (equilibrium value) Emission properties² VOC total emission	/min MF /min % /min % /min MF min MF min MF Thin MF Thi	IPa IPa IPa IPa IPa IPa J/m2 J/m2 J/m2 C	ISO 527-1,2 ISO 527-1,2 ISO 527-1,2 ISO 527-1,2 ISO 178 ISO 178 ISO 180-1A ISO 180-1A ISO 180-1A	0.65-0.75 55 4.7 70 2300 2280 85 53 39 30 130 128
Mechanical properties (23°C /50% H.R.)Yield stress50 mmYield strain50 mmElongation at break50 mmTensile modulus1 mm/rFlexural modulus2 mm/rFlexural strength23 °CIzod notched impact strength-30 °CIzod notched impact strength-40 °CThermal propertiesVicat softening temperatureVicat softening temperatureB120, 50Deflection temperature under load1.80 MDeflection temperature under load0.45CLTE, parallel23 to 5CLTE, transverse23 to 5Burning behavior UL 941.6 mnBurning rate (US-FMVSS)150x10Other properties (23°C)0Density25°CWater absorption (saturation value)WaterWater absorption (equilibrium value)23°C, 5Emission properties²VOC total emission	/min % /min % min MF min MF min MF X X X X X X 120°C/h °C Pa °C	IPa IPa IPa IJ/m2 J/m2 J/m2 C	ISO 527-1,2 ISO 527-1,2 ISO 527-1,2 ISO 178 ISO 178 ISO 180-1A ISO 180-1A ISO 180-1A	55 4.7 70 2300 2280 85 53 39 30
Yield strain Yield strain Elongation at break Tensile modulus Flexural modulus Flexural strength Izod notched impact strength Izod softening temperature Vicat softening temperature B120, Vicat softening temperature B50, 50 Deflection temperature under load Deflection temperature under load CLTE, parallel CLTE, parallel CLTE, transverse Burning behavior UL 94 Burning rate (US-FMVSS) Other properties (23°C) Density Water absorption (saturation value) Water Water absorption (equilibrium value) Emission properties² VOC total emission	/min % /min % min MF min MF min MF X X X X X X 120°C/h °C Pa °C	IPa IPa IPa IJ/m2 J/m2 J/m2 C	ISO 527-1,2 ISO 527-1,2 ISO 527-1,2 ISO 178 ISO 178 ISO 180-1A ISO 180-1A ISO 180-1A	4.7 70 2300 2280 85 53 39 30 130 128
Elongation at break Tensile modulus 1 mm/r Flexural modulus 2 mm/r Flexural strength 1 zod notched impact strength 2 o °C 1 zod notched impact strength 1 zod notched impact strength 2 o °C 1 zod notched impact strength 2 o °C 1 zod notched impact strength 1 zod notched impact strength 2 o °C 2 zod o zod	/min	IPa IPa IPa IJ/m2 J/m2 J/m2 C	ISO 527-1,2 ISO 527-1,2 ISO 178 ISO 178 ISO 180-1A ISO 180-1A ISO 180-1A ISO 306 ISO 306	70 2300 2280 85 53 39 30
Tensile modulus Flexural modulus Flexural strength Izod notched impact strength Izod notched impact strength Izod notched impact strength -30 °C Izod notched impact strength -40 °C Thermal properties Vicat softening temperature B120, Vicat softening temperature B50, 5 Deflection temperature under load Deflection temperature under load CLTE, parallel CLTE, transverse Burning behavior UL 94 Burning rate (US-FMVSS) Other properties (23°C) Density Water absorption (saturation value) Water absorption (equilibrium value) Emission properties² VOC total emission	min MF min MF min MF KJ KJ KJ 120°C/h °C Pa °C	IPa IPa IPa J/m2 J/m2 J/m2	ISO 527-1,2 ISO 178 ISO 178 ISO 180-1A ISO 180-1A ISO 180-1A ISO 306 ISO 306	2300 2280 85 53 39 30 130 128
Tensile modulus Flexural modulus Flexural strength Izod notched impact strength Izod notched	min MF min MF KJ KJ KJ 120°C/h °C 0°C/h °C Pa °C	IPa IPa J/m2 J/m2 J/m2 C	ISO 178 ISO 178 ISO 180-1A ISO 180-1A ISO 180-1A ISO 306 ISO 306	2280 85 53 39 30 130 128
Flexural strength Izod notched impact strength Izod notched impa	min MF KJ KJ KJ 120°C/h °C 0°C/h °C Pa °C	J/m2 J/m2 J/m2 J/m2	ISO 178 ISO 180-1A ISO 180-1A ISO 180-1A ISO 306 ISO 306	85 53 39 30 130 128
Izod notched impact strength Izod notched I	KJ KJ KJ 120°C/h °C 0°C/h °C Pa °C	J/m2 J/m2 J/m2 C	ISO 180-1A ISO 180-1A ISO 180-1A ISO 306 ISO 306	85 53 39 30 130 128
Izod notched impact strength -30 °C Izod notched impact strength -30 °C Izod notched impact strength -40 °C Thermal properties Vicat softening temperature B120, Vicat softening temperature B50, 5 Deflection temperature under load 1.80 M Deflection temperature under load 0.45 CLTE, parallel 23 to 5 CLTE, transverse 23 to 5 Burning behavior UL 94 1.6 mn Burning rate (US-FMVSS) 150x10 Other properties (23°C) Density 25°C Water absorption (saturation value) Water Water absorption (equilibrium value) 23°C, § Emission properties² VOC total emission 23°C	120°C/h °C 0°C/h °C Pa °C	J/m2 J/m2 C	ISO 180-1A ISO 180-1A ISO 306 ISO 306	39 30 130 128
Izod notched impact strength -30 °C Izod notched impact strength -40 °C Thermal properties Vicat softening temperature B120, Vicat softening temperature B50, 5 Deflection temperature under load 1.80 M Deflection temperature under load 0.45 CLTE, parallel 23 to 5 CLTE, transverse 23 to 5 Burning behavior UL 94 1.6 mm Burning rate (US-FMVSS) 150x10 Other properties (23°C) Density 25°C Water absorption (saturation value) Water Water absorption (equilibrium value) 23°C, § Emission properties² VOC total emission 23°C	KJ 120°C/h	J/m2 C	ISO 180-1A ISO 306 ISO 306	130 128
Izod notched impact strength -40 °C Thermal properties Vicat softening temperature B120, Vicat softening temperature B50, 5 Deflection temperature under load 1.80 M Deflection temperature under load 0.45 CLTE, parallel 23 to 5 CLTE, transverse 23 to 5 Burning behavior UL 94 1.6 mm Burning rate (US-FMVSS) 150x10 Other properties (23°C) Density 25°C Water absorption (saturation value) Water Water absorption (equilibrium value) 23°C, 5 Emission properties² VOC total emission 23°C	120°C/h °C 0°C/h °C Pa °C		ISO 306 ISO 306	130 128
Thermal properties Vicat softening temperature Vicat softening temperature Deflection temperature under load Deflection temperature under load CLTE, parallel CLTE, transverse Burning behavior UL 94 Burning rate (US-FMVSS) Other properties (23°C) Density Water absorption (saturation value) Water absorption (equilibrium value) Emission properties² VOC total emission B120, B5120, 1.80 M 1	0°C/h °C Pa °C	2	ISO 306	128
Vicat softening temperature Deflection temperature under load Deflection temperature under load CLTE, parallel CLTE, transverse Burning behavior UL 94 Burning rate (US-FMVSS) Other properties (23°C) Density Water absorption (saturation value) Water absorption (equilibrium value) Emission properties² VOC total emission 1.80 M 2.30 to 5	0°C/h °C Pa °C	2	ISO 306	128
Vicat softening temperature Deflection temperature under load Deflection temperature under load CLTE, parallel CLTE, transverse Burning behavior UL 94 Burning rate (US-FMVSS) Other properties (23°C) Density Water absorption (saturation value) Water absorption (equilibrium value) Emission properties² VOC total emission 1.80 M 1	Pa °C	_		
Deflection temperature under load CLTE, parallel CLTE, transverse Burning behavior UL 94 Burning rate (US-FMVSS) Other properties (23°C) Density Water absorption (saturation value) Water absorption (equilibrium value) Emission properties² VOC total emission 0.45 0.45 0.45 0.45 0.45 0.45 0.45 0.45 0.45 Value 1.6 mn 1.6 mn 1.6 mn 1.6 mn 1.7 1.7 1.7 1.7 1.8 1.8 1.9 1.9 1.9 1.9 1.9 1.9		`	ISO 75-1.2	
CLTE, parallel 23 to 5 CLTE, transverse 23 to 5 Burning behavior UL 94 1.6 mm Burning rate (US-FMVSS) 150x10 Other properties (23°C) Density 25°C Water absorption (saturation value) Water Water absorption (equilibrium value) 23°C, § Emission properties² VOC total emission 23°C			, _	104
CLTE, transverse Burning behavior UL 94 Burning rate (US-FMVSS) Other properties (23°C) Density Water absorption (saturation value) Water absorption (equilibrium value) Emission properties² VOC total emission 23 to 5 1.6 mn 25 °C Water 4.6 °C Water 23 °C Value 23 °C 23 °C 23 °C 23 °C	°C	5	ISO 75-1,2	123
Burning behavior UL 94 Burning rate (US-FMVSS) Other properties (23°C) Density Water absorption (saturation value) Water absorption (equilibrium value) Emission properties² VOC total emission 1.6 mn 1.7 mn 1.7 mn 1.7 mn 1.7 mn 1.8 mn 1.9 mn 1.9 mn 1.9 mn 1.9 mn 1.0 mn	5°C 10	0-4/K	ISO 11359 -1,2	0.77
Burning rate (US-FMVSS) Other properties (23°C) Density Water absorption (saturation value) Water absorption (equilibrium value) Emission properties² VOC total emission 150x10 Water 25°C Water absorption (saturation value) 23°C, 8	5°C 10	0-4/K	ISO 11359 -1,2	0.81
Other properties (23°C) Density 25°C Water absorption (saturation value) Water Water absorption (equilibrium value) 23°C, 8 Emission properties² VOC total emission 23°C	n Cla	lass	UL 94	НВ
Density 25°C Water absorption (saturation value) Water Water absorption (equilibrium value) 23°C, § Emission properties² VOC total emission 23°C	05x1 mm mr	nm/min	ISO 3795	< 80
Water absorption (saturation value) Water absorption (equilibrium value) Emission properties² VOC total emission 23°C				
Water absorption (equilibrium value) 23°C, 5 Emission properties² VOC total emission 23°C		_	ISO 1183-1	1.13
Emission properties ² VOC total emission 23°C	at 23 °C %		ISO 62	0.7
VOC total emission 23°C	50 % r.h. %	,)	ISO 62	0.2
		0 0	VDA 278	< 10
FOG total emission 23°C		0 0	VDA 278	< 10
Total carbon emission 23°C		gC/g	VDA 277	< 15
Processing conditions for test specimens				
Injection molding-melt temperature 260	μg		100.004	
Injection molding-mold temperature 80	°C µg		ISO 294	
Injection molding-injection velocity 240	μg		ISO 294 ISO 294 ISO 294	

Note: control measurements in other places may issue different results due to influences of machinery, equipment, test method or storage conditions.

2. Emissions from the pellet form sample



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Test values

Unless specified to the contrary, the values given have been established on standardised test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mould/die, the processing conditions and the colouring.

Processing note

Under the recommended processing conditions small quantities of decomposition product may be given off during processing. To preclude any risk to the health and well-being of the machine operatives, tolerance limits for the work environment must be ensured by the provision of efficient exhaust ventilation and fresh air at the workplace in accordance with the Safety Data Sheet. In order to prevent the partial decomposition of the polymer and the generation of volatile decomposition products, the prescribed processing temperatures should not be substantially exceeded. Since excessively high temperatures are generally the result of operator error or defects in the heating system, special care and controls are essential in these areas.

ELIX Polymers, S.L. - E-43006 Tarragona

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info@elix-polymers.com