ELIX PC/ABS 5130

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

Major Benefits

. Easy flow
. Very high impact up to -40ºC
. 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-butadiene-styrene (ABS).

Physical form

White to slightly yellowish pellets.

Handling information

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

Typical properties[1]

Property	Test Condition	Unit	Standard	Value
Rheological properties				
Melt volume-flow rate	260ªC, 5Kg	cm3/10 min	ISO 1133	21
Molding shrinkage, parallel	60x60x2 mm	%	ISO 294-4	0.65-0.75
Molding shrinkage, normal	60x60x2 mm	%	ISO 294-4	0.65-0.75
Mechanical properties (23ºC /50% H.R.)				
Yield stress	50 mm/min	MPa	ISO 527-1,2	55
Yield strain	50 mm/min	%	ISO 527-1,2	4.7
Elongation at break	50 mm/min	%	ISO 527-1,2	70
Tensile modulus	1 mm/min	MPa	ISO 527-1,2	2300
Flexural modulus	2 mm/min	MPa	ISO 178	2280
Flexural strength	2 mm/min	MPa	ISO 178	85
Izod notched impact strength	23 ºC	KJ/m2	ISO 180-1A	53
Izod notched impact strength	-30 ºC	KJ/m2	ISO 180-1A	39
Izod notched impact strength	-40 ºC	KJ/m2	ISO 180-1A	30
Thermal properties				
Vicat softening temperature	B120, 120ºC/h	ºC	ISO 306	130
Vicat softening temperature	B50, 50ºC/h	ºC	ISO 306	128
Deflection temperature under load	1.80 MPa	ºC	ISO 75-1,2	104
Deflection temperature under load	0.45	ºC	ISO 75-1,2	123
CLTE, parallel	23 to 55ºC	10^{-4}/K	ISO 11359 -1,2	0.77
CLTE, transverse	23 to 55ºC	10^{-4}/K	ISO 11359 -1,2	0.81
Burning behavior UL 94	1.6 mm	Class	UL 94	HB
Burning rate (US-FMVSS)	150x105x1 mm	mm/min	ISO 3795	< 80
Other properties (23ºC)				
Density	25ºC	Kg/m3	ISO 1183-1	1.13
Water absorption (saturation value)	Water at 23 ºC	%	ISO 62	0.7
Water absorption (equilibrium value)	23ºC, 50 % r.h.	%	ISO 62	0.2
Emission properties[2]				
VOC total emission	23ºC	µg/g	VDA 278	< 10
FOG total emission	23ºC	µg/g	VDA 278	< 10
Total carbon emission	23ºC	µgC/g	VDA 277	< 15
Processing conditions for test specimens				
Injection molding-melt temperature	260	ºC	ISO 294	
Injection molding-mold temperature	80	ºC	ISO 294	
Injection molding-injection velocity	240	mm/s	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.

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