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## **ELIX PC/ABS 5120**

PC/ABS blend, injection molding grade with excellent mechanical properties balance up to -40°C. Vicat B120 = 120°C

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### ***Major Benefits***

- . High 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-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<sup>1</sup>

Property	Test Condition	Unit	Standard	Value
<b>Rheological properties</b>				
Melt volume-flow rate	260°C, 5Kg	cm <sup>3</sup> /10 min	ISO 1133	21
Molding shrinkage, lengthwise	60x60x2 mm	%	ISO 294-4	0.65-0.75
Molding shrinkage, crosswise	60x60x2 mm	%	ISO 294-4	0.65-0.75
<b>Mechanical properties (23°C /50% H.R.)</b>				
Yield stress	50 mm/min	MPa	ISO 527-1,2	53
Yield strain	50 mm/min	%	ISO 527-1,2	4.5
Elongation at break	50 mm/min	%	ISO 527-1,2	45
Tensile modulus	1 mm/min	MPa	ISO 527-1,2	2320
Flexural modulus	2 mm/min	MPa	ISO 178	2320
Flexural strength	2 mm/min	MPa	ISO 178	85
Izod notched impact strength	23 °C	KJ/m <sup>2</sup>	ISO 180-1A	51
Izod notched impact strength	-30 °C	KJ/m <sup>2</sup>	ISO 180-1A	39
Izod notched impact strength	-40 °C	KJ/m <sup>2</sup>	ISO 180-1A	30
<b>Thermal properties</b>				
Vicat softening temperature	B120, 120°C/h	°C	ISO 306	120
Vicat softening temperature	B50, 50°C/h	°C	ISO 306	118
Deflection temperature under load	1.80 MPa	°C	ISO 75-1,2	101
Deflection temperature under load	0.45	°C	ISO 75-1,2	120
CLTE, parallel	23 to 55°C	10 <sup>-4</sup> /K	ISO 11359 -1,2	0.80
CLTE, transverse	23 to 55°C	10 <sup>-4</sup> /K	ISO 11359 -1,2	0.82
Burning behavior UL 94	1.6 mm	Class	UL 94	HB
Burning rate (US-FMVSS)	150x105x1 mm	mm/min	ISO 3795	< 80
<b>Other properties (23°C)</b>				
Density	25°C	Kg/m <sup>3</sup>	ISO 1183-1	1.11
Water absorption (saturation value)	Water at 23 °C	%	ISO 62	0.7
Water absorption (equilibrium value)	23°C, 50 % r.h.	%	ISO 62	0.2
<b>Emission properties<sup>2</sup></b>				
VOC total emission	23°C	µg/g	VDA 278	< 10
FOG total emission	23°C	µg/g	VDA 278	< 10
Total carbon emission	23°C	µgC/g	VDA 277	< 15
<b>Processing conditions for test specimens</b>				
Injection molding-melt temperature	260	°C	ISO 294	
Injection molding-mold temperature	80	°C	ISO 294	
Injection molding-injection velocity	240	mm/s	ISO 294	

Note: 1- 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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## ***Disclaimer for sales products***

### Disclaimer for sales products

This information and our technical advice - whether verbal, in writing or by way of trials - are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to verify the information currently provided –especially that contained in our safety data and technical information sheets– and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold and our advisory service is given in accordance with the current version of our General Conditions of Sale and Delivery.

### 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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