
ELIX PC/ABS 5120

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

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 properties¹

| Property | Test Condition | Unit | Standard | Value |
|---|-----------------|-------------------------|----------------|-----------|
| Rheological properties | | | | |
| Melt volume-flow rate | 260°C, 5Kg | cm ³ /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 |
| Mechanical properties (23°C /50% H.R.) | | | | |
| Yield stress | 50 mm/min | MPa | ISO 527-1,2 | 50 |
| Elongation at break | 50 mm/min | % | ISO 527-1,2 | 28 |
| 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 ² | ISO 180-1A | 51 |
| Izod notched impact strength | -30 °C | KJ/m ² | ISO 180-1A | 39 |
| Izod notched impact strength | -40 °C | KJ/m ² | ISO 180-1A | 30 |
| Thermal properties | | | | |
| 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 ⁻⁴ /K | ISO 11359 -1,2 | 0.80 |
| CLTE, transverse | 23 to 55°C | 10 ⁻⁴ /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 |
| Other properties (23°C) | | | | |
| Density | 25°C | Kg/m ³ | 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 |
| Emission properties² | | | | |
| 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 |
| Processing conditions for test specimens | | | | |
| 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

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.

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

Edition 29.10.2015

info@elix-polymers.com