

ELIX Ultra 4000 PG / LUSTRAN Ultra 4000 PG

Electroplating grade with high heat resistance

ISO Shortname: ISO 2580-1 -ABS 0, MG, 105-08-09-25

Property	Test Condition	Unit	Standard	Value
Rheological properties				
Melt volume-flow rate	220 °C; 10 kg	cm ³ /(10 min)	ISO 1133	6
Molding shrinkage, parallel	150x105x3	%	acc. ISO 2577	0,5-0,8
Molding shrinkage, normal	150x105x3	%	acc. ISO 2577	0,5-0,8
Mechanical properties (23 °C/50 % r. h.)				
Yield stress	50 mm/min	MPa	ISO 527-1,-2	46
Tensile Strain at break	50 mm/min	%	acc. ISO 527-1,-2	>15
Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2400
Flexural strength	2 mm/min	MPa	ISO 178	73
Flexural modulus	2 mm/min	MPa	ISO 178	2350
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-1A	23
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	10
Yield strain	50 mm/min	%	ISO 527-1,-2	3,1
Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	20
Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	10
Ball indentation hardness		N/mm ²	ISO 2039-1	100
Thermal properties				
Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	98
Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	103
Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	107
Burning behavior UL 94 (1.6 mm)	1.6 mm	Class	UL 94	HB
Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0,9
Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0,9
Electrical properties (23 °C/50 % r. h.)				
Relative permittivity	100 Hz	-	IEC 60250	3,0
Relative permittivity	1 MHz	-	IEC 60250	2,9
Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	63
Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	87
Volume resistivity		Ohm·m	IEC 60093	1E+14
Surface resistivity		Ohm	IEC 60093	1E+16
Electric strength	1 mm	kV/mm	IEC 60243-1	38
Comparative tracking index CTI	Solution A	Rating	IEC 60112	600
Other properties (23 °C)				
Density		g/cm ³	ISO 1183	1,05
Processing conditions for test specimens				
Injection molding-Melt temperature		°C	ISO 294	240
Injection molding-Mold temperature		°C	ISO 294	70
Injection molding-Injection velocity		mm/s	ISO 294	240

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Disclaimer

Disclaimer for developmental products

This is a developmental product. Further information, including amended or supplementary data on hazards associated with its use, may be compiled in the future. For this reason no assurances are given as to type conformity, processability, long-term performance characteristics or other production or application parameters. Therefore, the purchaser/user uses the product entirely at his own risk without having been given any warranty or guarantee and agrees that the supplier shall not be liable for any damages, of whatever nature, arising out of such use. Commercialization and continued supply of this material are not assured. Its supply may be discontinued at any time. 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 styrenics

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. This is valid especially for CTI.

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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