

## Elix Ultra 4105

Medium high heat grade with superior impact resistance, PC-modified, low emission

Property	Test Condition	Unit	Standard	Value
<b>Rheological properties</b>				
Melt volume-flow rate	260 °C; 5 kg	cm <sup>3</sup> /(10 min)	ISO 1133	14
Molding shrinkage, parallel	150x105x3	%	acc. ISO 2577	0.6-0.8
Molding shrinkage, normal	150x105x3	%	acc. ISO 2577	0.6-0.8
<b>Mechanical properties (23 °C/50 % r. h.)</b>				
Yield stress	50 mm/min	MPa	ISO 527-1,-2	45
Tensile Stress at break	50 mm/min	MPa	ISO 527-1,-2	37
Tensile Strain at break	50 mm/min	%	acc. ISO 527-1,-2	30
Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2000
Flexural strength	2 mm/min	MPa	ISO 178	70
Flexural modulus	2 mm/min	MPa	ISO 178	2000
Izod notched impact strength	23 °C	kJ/m <sup>2</sup>	ISO 180-1A	42
Izod notched impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 180-1A	34
Yield strain	50 mm/min	%	ISO 527-1,-2	3.7
Nominal strain at break	50 mm/min	%	ISO 527-1,-2	15
Charpy notched impact strength	23 °C	kJ/m <sup>2</sup>	ISO 179-1eA	40
Charpy notched impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 179-1eA	30
Ball indentation hardness		N/mm <sup>2</sup>	ISO 2039-1	85
<b>Thermal properties</b>				
Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	99
Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	108
Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	106
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 <sup>-4</sup> /K	ISO 11359-1,-2	0.9
Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 <sup>-4</sup> /K	ISO 11359-1,-2	0.9
Burning rate (US-FMVSS)	2.0 mm	mm/min	ISO 3795	34
Glow wire test (GWFI)	2.0 mm	°C	IEC 60695-2-12	700
<b>Electrical properties (23 °C/50 % r. h.)</b>				
Relative permittivity	100 Hz	-	IEC 60250	3
Relative permittivity	1 MHz	-	IEC 60250	3
Dissipation factor	100 Hz	10 <sup>-4</sup>	IEC 60250	38
Dissipation factor	1 MHz	10 <sup>-4</sup>	IEC 60250	86
Volume resistivity		Ohm·m	IEC 60093	6E+14
Surface resistivity		Ohm	IEC 60093	2E+17
<b>Other properties (23 °C)</b>				
Density		g/cm <sup>3</sup>	ISO 1183	1.070
<b>Processing conditions for test specimens</b>				
Injection molding-Melt temperature		°C	ISO 294	240

## Elix Ultra 4105

Property	Test Condition	Unit	Standard	Value
Injection molding-Mold temperature		°C	ISO 294	70
Injection molding-Injection velocity		mm/s	ISO 294	240

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### Disclaimer

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 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.

Emission disclaimer for Novodur

Components made of this grade are only pour in emission if processed correctly.

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