

Novodur P2H-AT

standard impact strength, easy flowing, high gloss, contains antistatic additive

ISO Shortname: ISO 2580-1 -ABS 0, MGZ, 095-30-16-25

Property	Test Condition	Unit	Standard	Value
Rheological properties				
C Melt volume-flow rate	220 °C; 10 kg	cm ³ /(10 min)	ISO 1133	37
C Molding shrinkage, parallel	60x60x2	%	ISO 294-4	0.4 - 0.6
C Molding shrinkage, normal	60x60x2	%	ISO 294-4	0.4 - 0.6
Mechanical properties (23 °C/50 % r. h.)				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2500
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	44
C Yield strain	50 mm/min	%	ISO 527-1,-2	2.1
Strain at break	50 mm/min	%	acc. ISO 527-1,-2	>15
C Tensile creep modulus	1 h	MPa	ISO 899-1	2200
C Tensile creep modulus	1000 h	MPa	ISO 899-1	1500
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	100
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	80
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	16
C Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	7
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-1A	16
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-1A	7
Flexural modulus	2 mm/min	MPa	ISO 178	2400
Flexural strength	2 mm/min	MPa	ISO 178	70
Ball indentation hardness		N/mm ²	ISO 2039-1	110
Thermal properties				
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	93
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	97
C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	98
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.9
C Burning behavior UL 94 (1.6 mm) [UL listed]	1.6 mm	Class	UL 94	HB
Burning rate (US-FMVSS)	2.0 mm	mm/min	ISO 3795	60
Glow wire test (GWFI)	2.0 mm	°C	IEC 60695-2-12	700
Electrical properties (23 °C/50 % r. h.)				
C Relative permittivity	100 Hz	-	IEC 60250	3.0
C Relative permittivity	1 MHz	-	IEC 60250	2.9
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	55
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	90
C Volume resistivity		Ohm·m	IEC 60093	1E13
C Surface resistivity		Ohm	IEC 60093	1E15
C Electric strength	1 mm	kV/mm	IEC 60243-1	34
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	600



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Property	Test Condition	Unit	Standard	Value
Other properties (23 °C)				
C Density		kg/m ³	ISO 1183	1050
Processing conditions for test specimens				
C Injection molding-Melt temperature		°C	ISO 294	240
C Injection molding-Mold temperature		°C	ISO 294	70
C Injection molding-Injection velocity		mm/s	ISO 294	240

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.

Disclaimer

Disclaimer for sales products

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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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LARIPUR®

LPR 8020

Thermoplastic Polyurethane

TECHNICAL DATA SHEET

Description: LARIPUR 8020 is a polyester based TPU. It is designed e.g. for injection molding of sport soles, screen elements, and technical items.

Physical Properties	Typical Value	Unit	Test Method
Specific Gravity	1,21	gr/cm ³	DIN 53479
Shore Hardness	82	A	DIN 53505
Abrasion Loss	30	mm ³	DIN 53516
Tensile Modulus:			
50%	4,7	N/mm ²	DIN 53504
100%	6,0	N/mm ²	DIN 53504
300%	11,3	N/mm ²	DIN 53504
Tensile Strength	46,1	N/mm ²	DIN 53504
Elongation at Break	600	%	DIN 53504
Tear Strength	72	N/mm	DIN 53515
VICAT Softening Point	84	°C	ISO 306
Compression Set:			
70h/23°C	18	%	DIN53517
22h/70°C	41	%	DIN53517

- The grade also suitable for extrusion are indicated by the EG or AE end code and consequently they have to be ordered with such code when used in this application.
- This technical note has been written on baseing our present best knowledge but the above mentioned data have not to be released as a specification for the material in object.
- Properties reported in this Data Sheet are determined on annealed specimens obtained by injected test plaques and mostly represent an average of values gathered from a significative number of production lots.
- Even if we guarantee the quality consistency of the LARIPUR products we could periodically issue up-dated version of this Technical Data Sheet and modify the respective sales specification as well .

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LARIPUR®

LPR 8020

Thermoplastic Polyurethane

PROCESS RECOMMENDATION

Predrying Condition: Material needs to be dried prior processing at 80°-90°C for 3 hours, preferably using a dehumidifying drier feeded by air exhibiting a dew point lower than -30°C.

Processing

Recommended Molding Temperature Profile

	°C
Zone 1	180
Zone 2	185
Zone 3	190
Nozzle	185

Being affected by type of machine used, processing condition and downstream equipment, the temperature profiles as given above has to be considered just as indicative.

Appearance Trasparent. (Evaluated on 6 mm thick test plaques)

Approvals EC and FDA food contact approved.

Health and security The product is not considered to be dangerous, nevertheless Safety Material Data Sheet is available upon request

Supply and package LPR 8020 is supplied in regular pellet form and it is packaged in 25 kg bags or 500 kg and 1000 kg octabins.

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