

TECHNYL ® B 50H1

Description	Flame retardant copolyamide 66/6, unreinforced, heat stabilised, for injection moulding.									
Applications	This phosphorus and halogen free flame retardant grade, UL 94 V0 (0.4 mm), offers excellent filling qualities and with good stiffness. It is particularly suitable for moulding insulating parts for electrical components : - On board materials for use in tunnels, satisfying specification n°3 of the Standard " Fire and Smoke " NF-F16102. - Components for electrical connections : junction blocks, terminal blocks, connectors. This product is available in natural, black, and in colours on request.									
Processing	The material is supplied in airtight bags, ready for use. In the case that the virgin material has absorbed moisture, it must be dried to a final moisture content of less than 0,2% with a dehumidified air drying equipment at approx 80°C. Recommended moulding conditions : <table><tr><td>Barrel temperatures :</td><td>- feed zone</td><td>240 - 250°C</td></tr><tr><td></td><td>- compression zone</td><td>245 - 255°C</td></tr><tr><td></td><td>- front zone</td><td>250 - 260°C</td></tr></table> Mould temperatures : 60 at 80°C For more detailed information , please refer to the technical sheet "Injection moulding".	Barrel temperatures :	- feed zone	240 - 250°C		- compression zone	245 - 255°C		- front zone	250 - 260°C
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Safety	Please refer to the Material Safety Data Sheet B4									

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Main properties

Values measured at 23 °C

The values of properties are for natural grade.

Properties		Standards	Unit	Values	
				EH 0 – 23 °C	EH 50 – 23 °C
<u>Physical</u>	Water absorption, 24h in water at 23°C	ISO 62	%	1.1	-
	Density	ISO 1183-A	g/cm3	1.16	-
	Moulding shrinkage longitudinal	RHODIA-EP	%	1.1	-
	Moulding shrinkage transverse	RHODIA-EP	%	1	-
<u>Mechanical</u>	Tensile Modulus	ISO 527	MPa	3600	2200
	Yield stress	ISO 527	MPa	80	40
	Elongation at yield	ISO 527	%	4	-
	Tensile strain at break	ISO 527	%	10	-
	Stress at 50% elongation	ISO 527	MPa	-	41
	Tensile stress at break	ISO 527	MPa	80	45
	Flexural modulus	ISO 178	MPa	3200	2000
	Flexural stress at break	ISO 178	MPa	105	70
	Charpy notched impact strength	ISO 179/1EA-1993	kJ/m2	4.5	12
	Charpy impact strength	ISO 179/1EU-1993	kJ/m2	90	NB
	Charpy impact strength ISO 179/1D	ISO 179-1982	kJ/m2	120	NB
	Izod notched impact strength	ISO 180	kJ/m2	3	10
<u>Thermal</u>	Melt temperature	ISO 3146 - C	°C	242	-
	Temper. of dimensional stability 1,8 MPa	ISO 75-2	°C	85	-
	Coef. linear expansion longit. 23°C-85°C	ASTM E 831	E-5 / °C	6.5	-
	Flammability UL94 thickness 0,4mm	ISO 1210/UL 94	-	V0	-
	Flammability UL94 thickness 0,8mm	ISO 1210/UL 94	-	V0	-
	Flammability UL94 thickness 1,6 mm	ISO 1210/UL 94	-	V0	-
	Glow wire test thickness 1,6 mm	IEC 695-2-1	°C	960	-
	Glow wire test thick. 1,6 mm : no flame	IEC 695-2-1	°C	650	650
	Glow wire test thick. 0,8 mm : c < 5s	IEC695-2-1/HN60-E-02	°C	960	960
Glow wire test thick. 1,6 mm : <5s	IEC695-2-1/HN60-E-02	°C	960	960	
<u>Electrical</u>	Relative permittivity 1MHz	IEC 250	-	3.6	4
	Dissipation factor 1 MHz	IEC 250	-	0.02	0.06
	Volume resistivity	IEC 93	E14.Ohm.cm	10	10
	Surface resistivity	IEC 93	E14.Ohm	10	0.01
	Dielectric strength	IEC 243-1	kV/mm	34	30
	Comparative tracking index KC	IEC 112	Volt	600	600
	Comparative tracking index KB	IEC 112	Volt	575	-
<u>Specific</u>	Fire and Smoke. F index	NFF 16.101 ET 16.102	-	2	-
	Fire and Smoke. I index	NFF 16.101 ET 16.102	-	2	-
	Fire and Smoke, specif.n°	NFF 16.102	-	3	-
	Limit oxygen index	ISO 4589	%	33	37

Identification code >PA66/6<

The information contained in this document is supplied in good faith. It is based on the extent of our knowledge of the products as listed, and on the tests and experiments carried out in our laboratories. It is to be used only as an indication and shall not be construed in any way as a formal commitment or warranty on our part. Compliance of our products with your conditions of application or use can only be determined pursuant to your own prior appropriate test. The listed values of properties are for natural grade, if not otherwise specified.



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