

TECHNICAL DATA SHEET

TECHNYL PROTECT A 31H1 MX35 GY 174N

TECHNYL A 31H1 MX35 GREY 174N

TECHNYL A 31H1 MX35 GREY 174N is a flame-retardant polyamide 66 reinforces with 35% of mineral filler, for injection moulding. This grade offers excellent flame retardancy properties (UL94, GWIT) combined with excellent processing, mechanical and electrical performance.

General

Certifications	UL listed product	EC 1907/2006 (REACH)
Polymer type	PA66	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA66-MD35 FR(17)
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Condition	Standard	Unit	Value
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Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm ³	1.65
Humidity absorption	T=23°C, 50% RH	ISO 62	%	0.35
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.55
Molding shrinkage, normal		ISO 294-4, 2577	%	0.4

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1mm/min	ISO 527-1/-2	MPa	10000 / 6700
Stress at break	5mm/min	ISO 527-1/-2	MPa	70 / 50
Strain at break	5mm/min	ISO 527-1/-2	%	1.2 / 1.6
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	9000 / 6000
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	110 / 75
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	18 / 22
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m ²	21 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	1.6 / -

*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	263
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	180

Condition	Standard	Unit	Value
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Burning behaviour

UL Yellow Card availability 1	Click here to have access to the UL Yellow Card availability 1 -> QMFZ2.E44716			
Flammability, 0.75 mm	0.75 mm	UL 94		V2
Flammability, 1.5 mm	1.5 mm	UL 94		V1
Flammability, 3.0 mm	3.0 mm	UL 94		V0
Glow-wire flammability index, GWFI, 0.75 mm	0.75 mm	IEC 60695-2-12	°C	960
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	960
Glow-wire flammability index, GWFI, 3.0 mm			°C	960
Glow-wire ignition temperature, GWIT, 1.5 mm	1.5 mm	IEC 60695-2-13	°C	775
Oxygen index			%	45.0

Condition	Standard	Unit	Value
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Electrical properties

Comparative tracking index	Solution A	IEC 60112	V	600.0
CTI performance level category		Sol A		PLC 0
Dielectric strength	1 mm	IEC 60243-1	kV/mm	42.0

Processing conditions

Drying temperature/time	80°C
Suggested max moisture	0.2 %
Rear temperature	265 - 275 °C
Middle temperature	270 - 280 °C
Front temperature	280 - 290 °C
Recommended mould temperature	60 - 90 °C