

### TECHNICAL DATA SHEET

## TECHNYL PROTECT A 31H1 V25 NC

TECHNYL A 31H1 V25 NC is a flame retardant polyamide PA66, reinforced with 25% of glass heat stabilised, for injection moulding.

### General

Feature	Heat-aging stabilized	Good strength
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Applications	Consumer good application	Power Tool & Garden Equipment
Colors available	Natural	
Forms	Pellets	

Condition	Standard	Unit	Value
-----------	----------	------	-------

### Physical properties

Density		ISO 1183	g/cm <sup>3</sup>	1.48
Water absorption	24 hr, 23°C	ISO 62	%	0.8

### Mechanical properties

dam / cond.\*

Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	9000 / 6500
Stress at break		ISO 527-1/-2	MPa	140 / 105
Strain at break		ISO 527-1/-2	%	2 / 3
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	7300 / 5000
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	55 / 55
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	8 / 10
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m <sup>2</sup>	6 / 7

### Thermal properties

Melting temperature, 10°C/min		ISO 11357-1	°C	263
-------------------------------	--	-------------	----	-----

# TECHNYL® PROTECT

Flame retardants

## TECHNICAL DATA SHEET

## TECHNYL PROTECT A 31H1 V25 NC

	Condition	Standard	Unit	Value
<b>Electrical properties</b>				
Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	1000000000
Comparative tracking index	Solution A	IEC 60112	V	300
CTI performance level category		Sol A		PLC 2
Dielectric strength	1 mm	IEC 60243-1	kV/mm	40

## Burning behaviour

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, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	960

\*: conditioned according to ISO 1110

## Processing conditions

Drying temperature/time	80
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

## Injection notes

The material is supplied in airtight bags, ready for use. In case that the virgin material has absorbed moisture, it must be dried with a dehumidified air drying equipment, dew point minimum -20°C. Recommended time 2-4h.

## Injection advice

All reinforced, flame retardant compounds generate some level of abrasion/corrosion to the steel processing equipment. These issues may be magnified by using incorrect processing conditions (temperatures, residence time, moisture level ...) during the moulding process. Therefore, Domo recommends you adhere to the processing conditions detailed in this technical data sheet. For equipment that comes into contact with molten flame retardant compounds, Domo advises you to use a steel with high chromium and high carbon content (having a minimum concentration of 16% chromium) to prevent corrosion and abrasion. For the correct reference of steel associated to flame retardant compounds' processing, please refer to your equipment manufacturers. In the case of high requirements on surface quality a mould temperature of up to 120°C can be considered. The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design.

### Disclaimer

The information provided in this documentation corresponds to our technical knowledge at the date of its publication and do not constitute a specification. This information may be subject to revision at our discretion. Domo cannot anticipate all conditions under which this information and our products of other manufacturers in combination with our products may be used. Domo accepts no responsibility for results obtained by the application of this information or for the safety and suitability of our products alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each product or product combination for their own purposes. Unless otherwise agreed in writing, Domo sells the product without warranties. Buyers and users assume all responsibility and liability for loss or damage arising from handling and use of our products, whether used alone or in combination with other products. Unless specifically indicated, the grades mentioned are not suitable for applications in the pharmaceutical/medical sector.