TECHNYL® PROTECT
Flame retardants

DOMO
caring is our formula

TECHNICAL DATA SHEET

TECHNYL PROTECT C 30H1 V30 NC/F

(Previously TECHNYL C 30H1 V30 NATURAL/F)

General

Feature	UL V0 Good stiffness	Flame retarded
Polymer type	PA6 (Polyamide 6)	
Processing technology	Injection molding	
Colors available	Natural	
Forms	Pellets	

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm³	1.62
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.1 - 0.15
Molding shrinkage, normal		ISO 294-4, 2577	%	0.65 - 0.7
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	12000 / 9100
Stress at break		ISO 527-1/-2	MPa	125 / 90
Strain at break		ISO 527-1/-2	%	1.7 / 2.3
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	11000 / -
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	220 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	37 / 40
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m²	30 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	9 / 13
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	222
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	197

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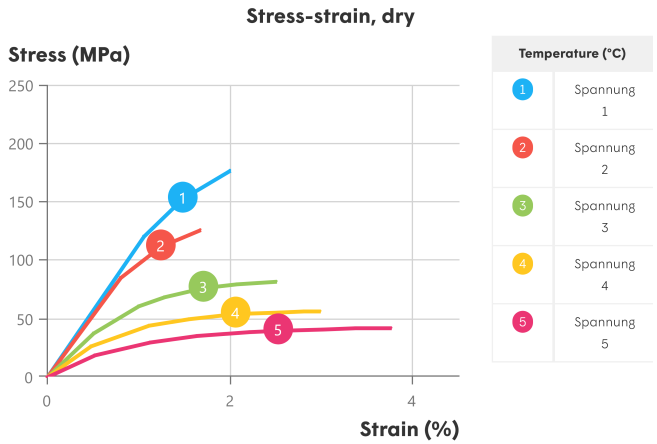
Burning behaviour

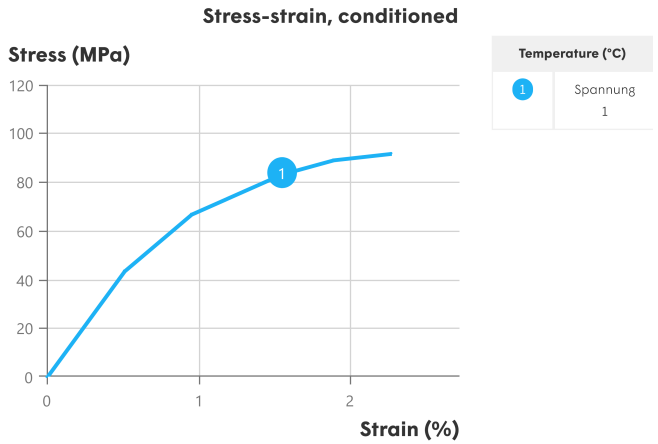
	Condition	Standard	Unit	Value
Flammability, 0.75 mm	0.75 mm	UL 94		V0
Flammability, 1.5 mm	1.5 mm	UL 94		V0
Flammability, 3.0 mm	3.0 mm	UL 94		V0
Glow-wire flammability index, GWFI, 0.75 mm	0.75 mm	IEC 60695-2-12	°C	960
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	960
Glow-wire ignition temperature, GWIT, 0.75 mm	0.75 mm	IEC 60695-2-13	°C	825
Glow-wire ignition temperature, GWIT, 1.5 mm	1.5 mm	IEC 60695-2-13	°C	850
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100

**: conditioned according to ISO 1110*

Processing conditions

Suggested max moisture	0.2 %
Rear temperature	230 - 240 °C
Middle temperature	240 - 250 °C
Front temperature	240 - 255 °C
Recommended mould temperature	80 - 100 °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

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