TECHNYL® PROTECT
Flame retardants

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TECHNICAL DATA SHEET

TECHNYL PROTECT A 30G1 A GN 6009

DOMAMID FR 66V0A

Polyamide 66, halogenated flame retardant, heat-aging stabilized, for injection moulding

General

Polymer type	PA66	
Certifications	RoHS EC 1907/2006 (REACH)	UL listed product
Feature	heat-aging stabilized halogen free flame retardant GWIT > 800°C	UL 94 V0 GWFI 960°C
Applications	electrical/electronic applications	
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA66 FR(17)
ISO 16396 designation	PA66,FR(17),MH,S14-030

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.38
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.9 - 1.1
Molding shrinkage, normal		ISO 294-4, 2577	%	1.0 - 1.2

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	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3500 / -
Strain at break	50 mm/min	ISO 527-1/-2	%	15 / -
Yield stress	50 mm/min	ISO 527-1/-2	MPa	75 / -
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	3000 / -
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	100 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	120 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	6 / -
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m²	110 / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	5 / -

: conditioned according to ISO 1110

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	262
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	205
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	90
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	230

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Burning behaviour

	Condition	Standard	Unit	Value
UL Yellow Card availability 1		**Click here to have access to the UL Yellow Card availability 1 -> E170540-100711591**		
Flammability, 0.75 mm	0.75 mm	UL 94		V0
Flammability, 3.0 mm	3.0 mm	UL 94		V0
Glow-wire flammability index, GWFI, 3.0 mm			°C	960
Glow-wire flammability index, GWFI	1-3 mm	IEC 60695-2-12	°C	960
Glow-wire ignition temperature, GWIT	1-3 mm	IEC 60695-2-13	°C	850
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

Electrical properties

	Condition	Standard	Unit	Value
Volume resistivity		IEC 62631-3-1	ohm.m	1.0E16
Surface resistivity		IEC 62631-3-1	ohm	1.0E14
Comparative tracking index	Solution A	IEC 60112	V	350.0
CTI performance level category		Sol A		PLC 2

Processing conditions

Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
Suggested max moisture	0.2 %
Recommended melt temperature	270 - 290 °C
Recommended mould temperature	70 - 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.