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TECHNICAL DATA SHEET

TECHNYL A 219 V15 YL 1078

(Previously DOMAMID 66G15H1 YL11078)

Polyamide 66, 15% glass fiber reinforced, heat-aging stabilized, for injection moulding

General

Feature	UL HB	Heat-aging stabilized
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS EC 1907/2006 (REACH)	UL-Yellow Card
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA66-GF15
ISO 16396 designation	PA66,GF15,M1H,S14-060

Physical properties	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.23
Water absorption	24 hr, 23°C	ISO 62	%	1 - 1.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.4 - 0.6
Molding shrinkage, normal		ISO 294-4, 2577	%	0.9 - 1.1

Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	6000 / 3950
Stress at break	5 mm/min	ISO 527-1/-2	MPa	100 / 65
Strain at break	5 mm/min	ISO 527-1/-2	%	1.85 / 7.7
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	5100 / 3400
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	160 / 95
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	25 / 45
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	4 / 6
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m²	20 / 45
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	3.7 / 5.5

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Thermal properties

	Condition	Standard	Unit	Value
Melting temperature, 10°C/min		ISO 11357-1	°C	262
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	245
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	230
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	245

Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	1E+013
Comparative tracking index	Solution A	IEC 60112	V	500
CTI performance level category		Sol A		PLC 1

Burning behaviour

UL Yellow Card availability (UL)	Click here to have access to the UL Yellow Card → E170540-225455			
Flammability, 1.5 mm	1.5 mm	UL 94		HB
Flammability, 3.0 mm	3.0 mm	UL 94		HB
Glow-wire flammability index, GWFI	1-3 mm	IEC 60695-2-12	°C	650
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

Test run at 23°C if not differently specified, DAM state (dry as moulded), valid for natural colored products.
**: conditioned according to ISO 1110*

Processing conditions

Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
Rear temperature	270 - 280 °C
Middle temperature	275 - 285 °C
Front temperature	280 - 290 °C
Recommended melt temperature	270 - 290 °C
Recommended mould temperature	90 - 110 °C

These parameters are typical of the product but should be related to the type of machinery used and to the type of moulded part.

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

For reinforced polyamides, Domo recommends the use of steel with a high content of carbon, and purified for polishing, to avoid or limit the abrasion. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (DIN Norm) or X160CrMoV12 (EN Norm) - 1.2601 /1.2379 (DIN Norm). 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.