

EXPERIMENTAL DATASHEET

TECHNYL XA 1722 ORANGE 2702

TECHNYL XA 1722 Orange 2702 is a polyamide PA 66, reinforced with 30% of glass fiber, self-coloured in Orange RAL 2003 & is suitable for Injection-moulding. This grade offers a unique Polyamide 66 solution for E-Mobility applications requiring Orange color as a functional property during all application lifetime. Thanks to a specific combination of coloring additives & thermal stabilizers, this grade exhibits an undisputable high color retention under thermal stress with a Polyamide based material. It provides consequently all benefits associated to a Polyamide compound, superior electrical insulation performances & high mechanical properties. It is furthermore suitable for UV laser-marking.

General

Feature	Heat-aging stabilized Organic heat stabilized	Lasermarkable
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Applications	Automotive Applications e-mobility	Connectors
Colors available	Orange	
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA66-GF30
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	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm ³	1.36
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.9
Water absorption	24 hr, 23°C	ISO 62	%	0.8
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.4
Molding shrinkage, normal		ISO 294-4, 2577	%	1.1

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	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	10000 / 7000
Stress at break		ISO 527-1/-2	MPa	190 / 110
Strain at break		ISO 527-1/-2	%	3 / 6
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	9000 / -
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	250 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	70 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	10 / -

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	260
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	250

Electrical properties

Comparative tracking index	Solution A	IEC 60112	V	600
CTI performance level category		Sol A		PLC 0

Burning behaviour

Flammability, 0.75 mm	0.75 mm	UL 94		HB
Flammability, 1.5 mm	1.5 mm	UL 94		HB
Flammability, 3.0 mm	3.0 mm	UL 94		HB

*: conditioned according to ISO 1110

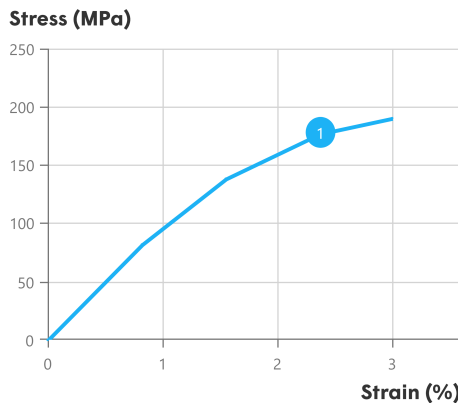
Processing conditions

Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	270 - 275 °C
Middle temperature	275 - 280 °C
Front temperature	280 - 285 °C
Recommended mould temperature	70 - 90 °C

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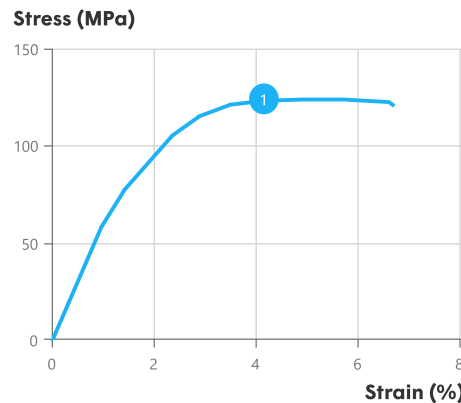
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Stress-strain, dry



Temperature (°C)	
1	Spannung
	1

Stress-strain, conditioned



Temperature (°C)	
1	Spannung
	4

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.

Disclaimer

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