

TECHNICAL DATA SHEET

TECHNYL RED J 218HP V35 BK 21N



TECHNYL RED J 218HP V35 BK 21N is a copolyamide 66/6T, reinforced with 35% glass fibre. Technyl® RED J offers outstanding long-term ageing performance up to 220°C (2000 hours) or 210°C (3000 hours). Technyl RED J has similar flow as standard PA66 and ensures a high chemical resistance and an excellent surface aspect. In addition, Technyl Red J is highly suitable for both vibration and hot gas welding, delivering high burst pressure levels. Recommended melt and mold temperatures are significantly lower than competitive PA4.6 or PPA resins, which saves energy during processing and minimizes part cooling time. The data provided are based on laboratory / experimental results and could be adjusted after industrial production.

General

Polymer type	PA66/6T copolymer	
Certifications	RoHS	EC 1907/2006 (REACH)
Feature	heat-aging stabilized excellent surface finish	excellent processability heat resistant
Applications	automotive applications	
Colors available	black	
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA66/6T+6-GF35
ISO 16396 designation	PA66/6T,GF35,MH,S14-110

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm ³	1.42
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.9
Water absorption	24 hr, 23°C	ISO 62	%	0.2
Water absorption, saturation			%	5.2
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.1 - 0.3
Molding shrinkage, normal		ISO 294-4, 2577	%	0.6 - 0.8

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	11000 / 7200
Stress at break		ISO 527-1/-2	MPa	203 / 125
Strain at break		ISO 527-1/-2	%	3.2 / 6
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	10400 / 7400
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	300 / 200
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	80 / 85
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m ²	65 / 80
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	12 / 14
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m ²	10 / 11

*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	270
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	262
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	235

Condition	Standard	Unit	Value
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Burning behaviour

Burning rate, FMVSS, Thickness 1 mm		FMVSS 302	<100 mm/min
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Processing conditions

Drying temperature/time	80 °C
Suggested max moisture	0.12 %
Rear temperature	290 - 300 °C
Middle temperature	295 - 305 °C
Front temperature	300 - 310 °C
Recommended mould temperature	85 - 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

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.