

TECHNYL STAR® AFX 218 V60 BLACK 31N

Polyamide 66

Technyl Suppliers

Technical Data

Product Description

TECHNYL STAR® AFX 218 V60 Black 31N is a high flow polyamide 66 resin, reinforced with 60% of glass fibre, heat stabilized, for injection moulding. Due to its outstanding flow characteristics, this grade shows exceptional processing behaviour and excellent surface aspect of the finished part.

General

Material Status	• Commercial: Active
UL Yellow Card ¹	• E44716-102429423 • E507491-104288127
Search for UL Yellow Card	• Technyl Suppliers • TECHNYL STAR®
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 60% Filler by Weight
Additive	• Heat Stabilizer
Features	• Good Dimensional Stability • Heat Stabilized - Inorganic • High Flow • High Stiffness • Outstanding Surface Finish
Uses	• Automotive Applications • Consumer Applications • Handles • Industrial Applications
Agency Ratings	• EC 1907/2006 (REACH) • UL QMFZ2
RoHS Compliance	• RoHS Compliant
Appearance	• Black • Natural Color
Forms	• Pellets
Processing Method	• Injection Molding
Multi-Point Data	• Isothermal Stress vs. Strain (ISO 11403-1)
Resin ID (ISO 1043)	• PA66-GF60

Physical	Dry	Conditioned	Unit	Test Method
Density	1.69	--	g/cm ³	ISO 1183/A
Molding Shrinkage				ISO 294-4
Across Flow	0.60	--	%	
Flow	0.35	--	%	
Water Absorption				ISO 62
24 hr, 23°C	0.60	--	%	
Equilibrium, 23°C, 50% RH	1.2	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	22000	16500	MPa	ISO 527-1/1A
Tensile Stress (Break, 23°C)	270	195	MPa	ISO 527-2/1A
Tensile Elongation (Break, 23°C)	2.1	3.1	%	ASTM D638 ISO 527-2
Flexural Modulus (23°C)	20000	15000	MPa	ISO 178
Flexural Stress (23°C)	410	300	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	17	18	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	95	90	kJ/m ²	ISO 179/1eU
Notched Izod Impact Strength (23°C)	17	20	kJ/m ²	ISO 180
Unnotched Izod Impact Strength (23°C)	94	92	kJ/m ²	ISO 180/1U



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Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load 1.8 MPa, Unannealed	255	--	°C	ISO 75-2/Af
Melting Temperature	262	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	1.5E-5	--	cm/cm/°C	
Flow : 70 to 150°C	1.2E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	6.0E-5	--	cm/cm/°C	
Transverse : 70 to 150°C	1.1E-4	--	cm/cm/°C	

Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity (0.800 mm)	1.0E+13	--	ohms	IEC 60093
Volume Resistivity (0.800 mm)	1.0E+14	--	ohms·cm	IEC 60093
Electric Strength (0.800 mm)	40	--	kV/mm	IEC 60243-1
Comparative Tracking Index (Solution A)	550	--	V	IEC 60112

Injection	Dry Unit
Drying Temperature	80 °C
Suggested Max Moisture	0.20 %
Rear Temperature	265 to 275 °C
Middle Temperature	270 to 280 °C
Front Temperature	280 to 290 °C
Mold Temperature	60 to 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 mini -20°C. Recommended time 2-4h

Injection Advice:

- For reinforced polyamides, the TECHNYL® manufacturers recommend 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

Notes

¹ A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

² Typical properties: these are not to be construed as specifications.



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Where to Buy

Supplier

Technyl Suppliers

Web: <http://www.technyl.com>

Distributor

Amco Polymers

Telephone: 800-262-6685

Web: <http://www.amcopolymers.com/>

Availability: North America

GAZECHIM PLASTIQUES

GAZECHIM PLASTIQUES is a Pan European distribution company. Contact GAZECHIM PLASTIQUES for availability of individual products by country.

Telephone: +33-4-67-49-55-37

Web: <http://www.gazechim.com/>

Availability: France

TER HELL Plastic GmbH

TER HELL Plastic is a Pan European distribution company. Contact TER HELL Plastic for availability of individual products by country.

Telephone: +49-2366-5661-0

Web: <https://www.terplastics.com/>

Availability: Germany

Ultrapolymers

Ultrapolymers is a Pan European distribution company. Contact Ultrapolymers for availability of individual products by country.

Telephone: +32-11-57-95-57

Web: <http://www.ultrapolymers.com/>

Availability: Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Lithuania, Macedonia, Netherlands, Norway, Portugal, Romania, Serbia, Slovakia, Slovenia, South Africa, Spain, Sweden, Turkey, United Kingdom

