

TECHNYL STAR®

TECHNYL STAR® SX 218L1 V50 BLACK 38N-K

TECHNICAL DATA SHEET

Revised: March, 2017

TECHNYLSTAR® SX 218L1 V50 BLACK 38N-K is based on a patented high flow polyamide 6 resin (Technylstar), reinforced with 50% glass fibre, heat & improved UV stabilized, for injection moulding. Due to its outstanding flow characteristics, this grade allows more freedom in mold and part design versus a standard polyamide solution.

CONTACT INFORMATION

For Outside Europe, <https://www.basf.com/global/en/legal/contact.html>

GENERAL

Material Status	• Commercial: Active
Availability	• Asia Pacific • North America
Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight
Additive	• Heat Stabilizer • UV Stabilizer
Key Benefits	• Good Dimensional Stability • High Stiffness • High Flow • Superior Surface Finish • Heat Stabilized (Inorganic) • Good UV Resistance
Applications	• Automotive applications • External rear mirror bracket • Consumer and Industrial applications • Furnitures • Door handles
RoHS Compliance	• RoHS Compliant
Colors Available	• Black
Processing Method	• Injection Molding
Part Marking Code (ISO 11469)	• >PA6-GF50<

PROPERTIES

Physical	Dry	Conditioned	Unit	Test Method
Water Absorption (24 hr, 23°C)	0.70		%	ISO 62
Density	1.56		g/cm ³	ISO 1183

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus ¹ (23°C)	17500	11000	MPa	ISO 527
Tensile Strength				
Break	210		MPa	ASTM D638
Break, 23°C ¹	220	140	MPa	ISO 527
Tensile Elongation				
Break, 23°C	2.8		%	ASTM D638
Break, 23°C	2.4	4.4	%	ISO 527
Flexural Modulus (23°C)	15000		MPa	ASTM D790
Flexural Strength	300		MPa	ASTM D790
Charpy Notched Impact Strength (23°C)	13	20	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	80	90	kJ/m ²	ISO 179/1eU
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
1.8 MPa, Unannealed	209		°C	ASTM D648
1.8 MPa, Unannealed	210		°C	ISO 75-2/ Af
Melting Temperature	220		°C	ISO 11357-3
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (3.2 mm)	HB			UL 94

PROCESSING

Injection	Dry	Unit
Drying Temperature	80	°C
Suggested Max Moisture	0.20	%
Rear Temperature	230 to 235	°C
Middle Temperature	235 to 245	°C
Front Temperature	245 to 250	°C
Mold Temperature	80 to 100	°C

DISCLAIMER

The information contained in this document is given in good faith based on our current knowledge. It is only an indication and it is in no way binding. This information must on no account be used as a substitute for necessary prior tests which alone can ensure that a product is suitable for a given use. ANY WARRANTY OF PRODUCT PERFORMANCE, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS EXPRESSLY EXCLUDED. Users are responsible for ensuring compliance with local legislation and for obtaining the necessary certifications and authorizations. Users are requested to check that they are in possession of the latest version of this document.

SAFETY INFORMATION

Detailed information regarding safety are available on the safety data sheet (SDS). SDS is sent with the first material order or available by contacting our customer services

REGULATIONS COMPLIANCE

This product is not intended to be used for the following regulated market: food contact, drinking water, toys, cosmetics or medical devices.

This grade complies with ROHS Directive 2011/65/EU and 2015/863 as amended.

CUSTOMER SERVICES

Our customer services are not only concerned with manufacturing and supply of Engineering Plastics products. We are available to assist our customers in finding technical solutions that meet their requirements. Specific support is in particular offered on:

- Material selection
- Material testing
- Parts design advice, training for design engineers
- Part testing
- Design simulation
- Processing through different technologies
- Assembly and post-processing technology expertise
- Parts optimization through Computer Aided Design

Notes

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

¹ Type 1A