

TECHNYL® A 238 V13 Natural is a polyamide 6.6, reinforced with 13% of glass fiber, heat stabilized, impact modified, for injection moulding. This grade offers excellent combination between rigidity and impact resistance at ambient temperature.

GENERAL

Material Status	• Commercial: Active	
Availability	• Asia Pacific	• Latin America
Filler / Reinforcement	• Glass Fiber, 13% Filler by Weight	
Additive	• Impact Modifier	
Key Benefits	• Heat Aging Resistance • Heat Stabilized (Inorganic)	• Good Impact Resistance • Good Mold Release
Applications	• Connectors • Consumer and Industrial applications	• Structural parts
RoHS Compliance	• RoHS Compliant	
Automotive Specifications	• FORD WSK-M4D669-A • GM GMW15702-022851 PA66-GF13 Color: Natural	• IMDS ID 271211525 Color: Natural
Colors Available	• Black	• Natural Color
Forms	• Pellets	
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PA66-GF13	

PROPERTIES

Typical values of properties are for Natural grades

Physical	Dry	Conditioned	Unit	Test Method
Density	1.20		g/cm³	ISO 1183
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	5500	3650	MPa	ISO 527-2/1A
Tensile Stress (Yield, 23°C)	100	60	MPa	ISO 527-2/1A
Tensile Strain (Yield, 23°C)	4.0	8.0	%	ISO 527-2
Charpy Notched Impact Strength (23°C)	6.0	8.0	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	65	60	kJ/m²	ISO 179/1eU
Notched Izod Impact Strength (23°C)	8.0	10	kJ/m²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature 1.8 MPa, Unannealed	228		°C	ISO 75-2/Af
Melting Temperature	263		°C	ISO 11357-3

Flammability	Dry	Conditioned Unit	Test Method
Flame Rating (1.6 mm)	HB		UL 94

PROCESSING

Injection	Dry Unit
Drying Temperature	80 °C
Suggested Max Moisture	0.20 %
Rear Temperature	270 to 280 °C
Middle Temperature	275 to 285 °C
Front Temperature	280 to 290 °C
Mold Temperature	70 to 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 mini -20°C. Recommended time 2-4h

Injection Advice:

- For reinforced polyamides, Solvay 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

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 substitutive 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, and Solvay is at their disposal to supply any additional information.

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.