TECHNYL eXten® D 247 F NATURAL

TECHNICAL DATA SHEET

Revised: April, 2017

TECHNYL eXten® D 247F Natural is an unfilled grade based on polyamide blend of polyamide 6.10 and polyamide 66, heat stabilized, impact modified, for injection moulding. This grade has been designed to offer high impact strength, alkali resistance and excellent productivity. It is a partially bio-sourced material.

GENERAL

Material Status	• Commercial: Active	
Availability	• Asia Pacific	
Additive	• Heat Stabilizer	• Impact Modifier
Key Benefits	• Partially Bio-based • High Chemical Resistance	• Good Impact Resistance • Good Mold Release
Applications	• Battery gaskets	• Cable ties
Certification/Compliance	• EC 1907/2006 (REACH)	
RoHS Compliance	• RoHS Compliant	
Colors Available	• Natural Color	
Forms	• Pellets	
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PA610+PA66	

PROPERTIES

Typical values of properties are for Natural grades

Physical	Dry	Conditioned	Unit	Test Method
Molding Shrinkage				ISO 294-4
Across Flow	1.4		%	
Flow	1.0		%	
Water Absorption				ISO 62
24 hr, 23°C	0.65		%	
Equilibrium, 23°C, 50% RH	1.4		%	
Density	1.07		g/cm³	ISO 1183/A

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	2400	1300	MPa	ISO 527-2/1A
Tensile Strength				
Yield, 23°C	55		MPa	ASTM D638
Yield, 23°C	60	40	MPa	ISO 527-2/1A
Tensile Elongation				
Break, 23°C	40		%	ASTM D638
Break, 23°C	33	> 35	%	ISO 527-2

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Mechanical	Dry	Conditioned	Unit	Test Method
Flexural Modulus				
23°C	2600		MPa	ASTM D790
23°C	2150	1300	MPa	ISO 178
Flexural Strength				
23°C	75.0		MPa	ASTM D790
23°C	80.0	45.0	MPa	ISO 178
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	11		kJ/m²	
23°C	11	20	kJ/m²	
Notched Izod Impact (23°C)	170		J/m	ASTM D256

Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	182		°C	ASTM D648
0.45 MPa, Unannealed	140		°C	ISO 75-2/Bf
1.8 MPa, Unannealed	68		°C	ASTM D648
1.8 MPa, Unannealed	60		°C	ISO 75-2/Af
Melting Temperature	252		°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	260 to 270	°C
Middle Temperature	265 to 275	°C
Front Temperature	270 to 280	°C
Mold Temperature	60 to 80	°C

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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 unfilled polyamides, Solvay recommends the use of high alloy steel with a low chromium content. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (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

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.

Grades produced or imported in Europe comply with REACH directive 1907/2006/EC 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

You can find more information on Solvay Product range on our internet product finder at the following address: http://www.technyl.com

Notes

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