TECHNYL eXten® D 458P NATURAL

TECHNICAL DATA SHEET

Revised: April, 2019

TECHNYL® eXten D 458P Natural is a high viscosity unfilled plasticized PA6.10 for extrusion applications. This grade is also UV stabilized. This polyamide 6,10 for extrusion is specially performing where high flexibility and toughness are requested. It is specially developed for automotive and other applications where a long term high temperature usage is requested. It is a partially bio-sourced material.

GENERAL

Material Status	• Commercial: Discontinued	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Additive	• Heat Stabilizer	
Key Benefits	• Partially Bio-based • High Chemical Resistance • Heat Stabilized (Inorganic)	• Low Temperature Impact Resistance • Good UV Resistance
Applications	• Automotive applications • Consumer and Industrial applications • Coolant pipes	• Fuel filler tube • Pipes
Certification/Compliance	• EC 1907/2006 (REACH)	
RoHS Compliance	• RoHS Compliant	
Colors Available	• Natural Color	
Forms	• Pellets	
Processing Method	• Extrusion	
Resin ID (ISO 1043)	• PA610	

PROPERTIES

Typical values of properties are for Black grades

Physical	Dry	Conditioned	Unit	Test Method
Water Absorption				ISO 62
24 hr, 23°C	0.46		%	
Saturation, 23°C	1.8		%	
Density	1.04		g/cm³	ISO 1183/A

Solvay Engineering Plastics
www.solvay.com - www.technyl.com

Tel: 00 800 55 400 600
technyl-emea@solvay.com - Europe, Middle East, Africa
technyl-apac@solvay.com - Asia Pacific
technyl-americas@solvay.com - Americas

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Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	800	550	MPa	ISO 527-2/1A
Tensile Stress				ISO 527-2/1A
Yield, 23°C	35		MPa	
Break, 23°C	40	34	MPa	
Tensile Strain (Break, 23°C)	150	240	%	ISO 527-2
Flexural Modulus (23°C)	690	530	MPa	ISO 178
Flexural Stress (23°C)	30.0	22.0	MPa	ISO 178
Charpy Notched Impact Strength (23°C)	87	120	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	No Break	No Break		ISO 179/1eU

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/Af
1.8 MPa, Unannealed	51		°C	
Melting Temperature	215		°C	ISO 11357-3

Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
0.8 mm	HB			
1.6 mm	HB			
3.2 mm	HB			

Extrusion	Dry	Unit
Cylinder Zone 1 Temp.	205 to 225	°C
Cylinder Zone 2 Temp.	215 to 235	°C
Cylinder Zone 3 Temp.	220 to 240	°C
Die Temperature	215 to 235	°C

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Extrusion Notes

PROCESSING GUIDE

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.

Recommended maximum water content: 0,10 %

Drying conditions: 8h at 80°C with dry air, dew point -35°C

EXTRUDER DESIGN:

Screw type : Pa type (with short transition length, 4D or less) recommended but standard type (with medium transition length, 5 to 7D) acceptable in most cases.

Screw length: Typical L/D~24-28

Screw compression rate: 3 to 4:1

Steel advice for tools: For unfilled polyamide, Solvay recommends of the use of high alloy steel with a weak chromium content. For example: 35NC6 or 35CD4.

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, MERCHANDABILITY 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.

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.