Engineering Plastics'
TECHNYL® eXten

Product Data Sheet

24.06.2013

TECHNYL EXTEN D 458P NATURAL

(provisional data Sheet)

Description

TECHNYL® eXten D 458P Natural is a high viscosity unfilled plasticized PA6.10 for extrusion applications. The product is also UV stabilized.
It is a partially bio-sourced material.
It is available in natural color.

Key Properties

Flexibility
High impact at low temperature
Very high viscosity
Low warpage

Benefits

This Polyamide 6,10 product is specially performing where high flexibility and toughness are requested, especially at low temperature. It is also providing low end part warpage.

Applications

TECHNYL® eXten D 458P Natural is specially developed for automotive and other applications where a long term high temperature usage is requested.

More info : www.rhodia.com Tel: 00 800 55 400 600
Contact : engineeringplastics-business@eu.rhodia.com

SOLVAY

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Properties

Typical values of properties are for natural grades

	Standards	Unit	Values d.a.m.	Values Cond.
Physical				
Water absorption(24h at 23°C)	ISO 62	%	0,46	
Water absorption(At saturation)	ISO 62	%	1,75	
Density	ISO 1183/A	g/cm3	1,04	
Molding shrinkage Parallel	RHODIA	%	3,50	
Molding shrinkage normal or perpendicular	RHODIA	%	3,05	
Molding Shrinkage Isotropy	RHODIA		1,16	
Mechanical				
Tensile Modulus	ISO 527 Type 1A	MPa	800	550
Tensile strength at yield	ISO 527 Type 1A	MPa	35	
Tensile strength at break	ISO 527 Type 1A	MPa	40	34
Elongation at break	ISO 527 Type 1A	%	150	240
Flexural modulus	ISO 178	MPa	690	530
Flexural maximum stress	ISO 178	MPa	30	22
Charpy notched impact strength (23 °C)	ISO 179/1eA	kJ/m2	87	117
Charpy notched impact strength (-30 °C)	ISO 179/1eA	kJ/m2	15	19
Charpy unnotched impact strength	ISO 179/1eU	kJ/m2	NB	NB
Flammability				
Flammability (Thickness: 0,8 mm)	ISO 1210 / UL94		HB	
Flammability (Thickness: 1,6 mm)	ISO 1210 / UL94		HB	
Flammability (Thickness: 3,2 mm)	ISO 1210 / UL94		HB	
Thermal				
Melting Temperature	ISO 11357	°C	215	
Heat deflection temperature (1,8 MPa)	ISO 75/Af	°C	51	
Specific				
Identification code				PA610-I

d.a.m. = dry as moulded
Cond = conditioned

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SOLVAY

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: 0,1 %

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

Extrusion parameters

Temperature (°C)	
Feeding zone:	205 - 225 °C
Compression zone:	215 - 235 °C
Front zone:	220 - 240 °C
Die:	215 - 235 °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, Rhodia recommends the use of high alloy steel with a weak chromium content. For example: 35NC6 or 35CD4.

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

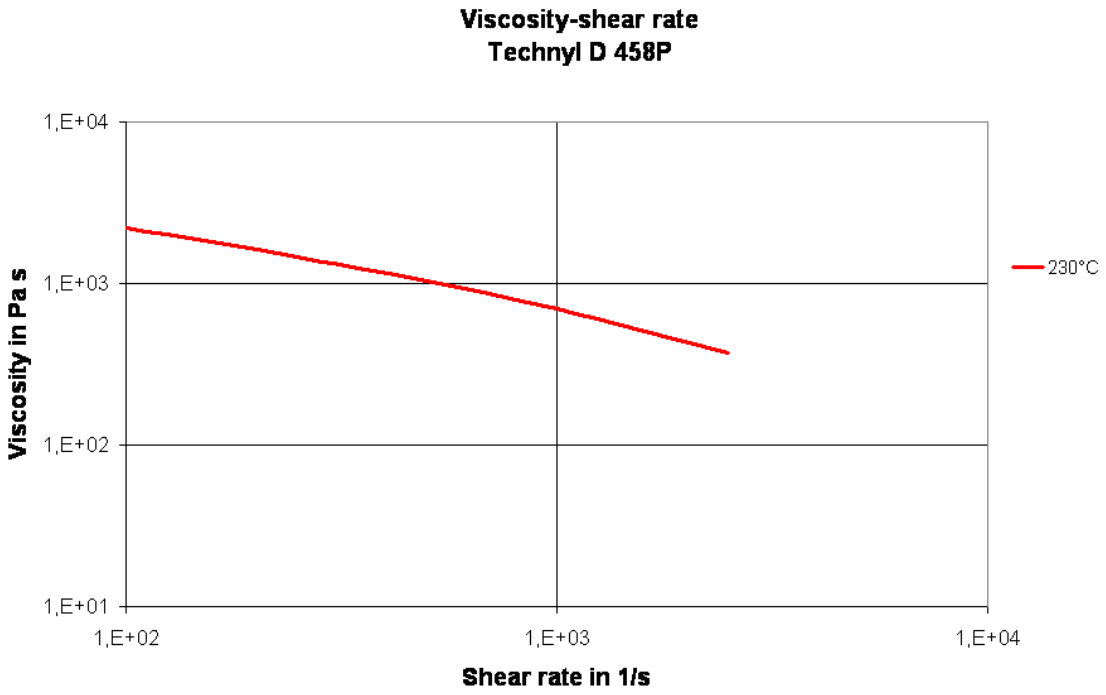
Grades produced or imported in Europe comply with directive 453/2010/EC, which amends REACH directive 1907/2006/EC
This grade complies with RoHS directive 2002/95/EC
Unless specified, this grade is not suitable for food contact, medical devices or toy applications

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
- Processing through different technologies
- Assembly and post-processing technology expertise
- Parts optimization through Computer Aided Design

You can find more information on Rhodia Product range on our internet product finder at the following address:
http://www.rhodia.com/en/markets_and_products/product_finder

Viscosity-shear rate



Stress-strain