

TECHNYL®

TECHNYL® A 402 NATURAL FA

TECHNICAL DATA SHEET

Revised: September, 2018

TECHNYL® A 402 Natural FA is an unreinforced polyamide PA66, very high viscosity, for extrusion. This grade offers three main advantages: high impact resistance at low humidity levels, good rigidity, and excellent compression resistance. It is designed to be used in food contact applications.

GENERAL

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Key Benefits	• Food Contact Approved • Good Impact Resistance • High Viscosity
Applications	• Films • Food contact application • Packaging • Railway insulators • Structural parts
Certification/Compliance	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Colors Available	• Natural Color
Forms	• Pellets
Processing Method	• Extrusion
Resin ID (ISO 1043)	• PA66

PROPERTIES

Typical values of properties are for Natural grades

Physical	Dry	Conditioned	Unit	Test Method
Molding Shrinkage				ISO 294-4
Across Flow	1.7		%	
Flow	1.7		%	
Water Absorption				
24 hr, 23°C	1.5		%	ISO 62
Equilibrium, 23°C, 50% RH	3.0		%	ISO 1110
Density	1.14		g/cm ³	ISO 1183/A
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	3100	1300	MPa	ISO 527-2/1A
Tensile Stress				ISO 527-2/1A
Yield, 23°C	80	45	MPa	
Break, 23°C	50	30	MPa	
Tensile Strain				ISO 527-2
Yield, 23°C	8.0	30	%	
Break, 23°C	30	> 150	%	
Flexural Modulus (23°C)	2800	1050	MPa	ISO 178

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Page: 1 of 5



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Mechanical	Dry	Conditioned	Unit	Test Method
Flexural Stress (23°C)	120	45.0	MPa	ISO 178
Charpy Notched Impact Strength (23°C)	7.0	30	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	No Break	No Break		ISO 179/1eU
Notched Izod Impact Strength (23°C)	5.5	20	kJ/m ²	ISO 180

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	190		°C	ISO 75-2/Bf
1.8 MPa, Unannealed	65		°C	ISO 75-2/Af
Melting Temperature	263		°C	ISO 11357-3

Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+14	1.0E+13	ohms	IEC 60093
Volume Resistivity	1.0E+15	1.0E+14	ohms·cm	IEC 60093
Electric Strength				IEC 60243-1
23°C, 0.800 mm	35		kV/mm	
23°C, 2.00 mm	22		kV/mm	
Relative Permittivity (23°C, 2.00 mm, 1 MHz)	3.50			IEC 60250
Dissipation Factor (1 MHz)	0.033			IEC 60250
Comparative Tracking Index (Solution A)	600	600	V	IEC 60112

Extrusion	Dry	Unit
Suggested Max Moisture	0.080	%
Cylinder Zone 1 Temp.	280 to 300	°C
Cylinder Zone 2 Temp.	270 to 290	°C
Cylinder Zone 3 Temp.	270 to 290	°C
Die Temperature	260 to 280	°C

Extrusion 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.

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: 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

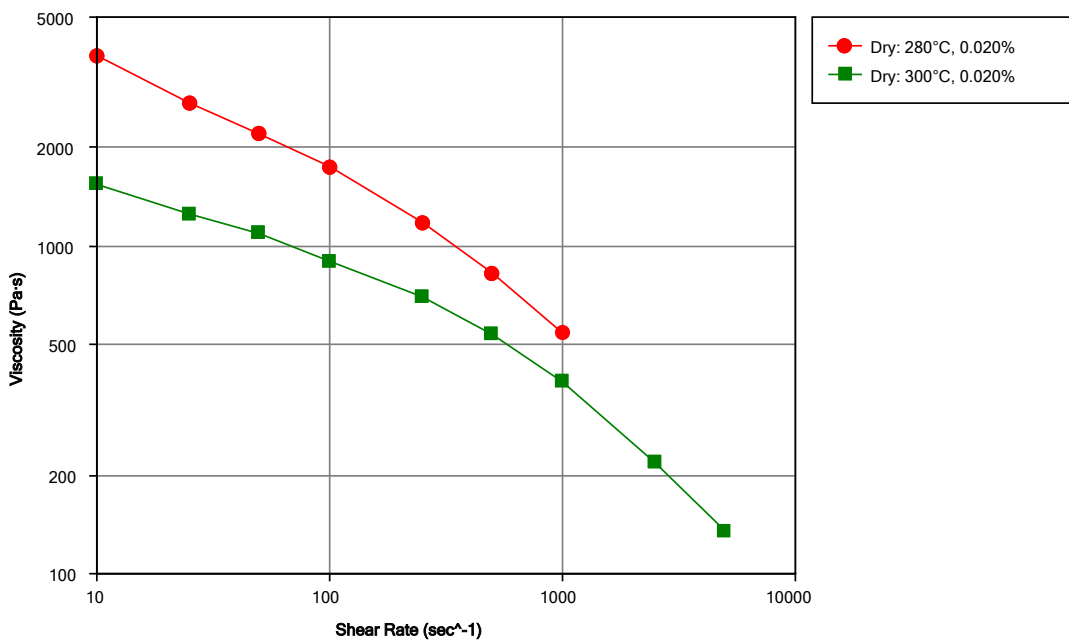
Our customer services are not only concerned with manufacturing and supply of Engineering Plastics products. We are available to assist our customers in finding technical solutions that meet their requirements. Specific support is in particular offered on:

- 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>

MULTIPOINT DATA

Viscosity vs. Shear Rate (ISO 11403-2)



Notes

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

