TECHNYL®

TECHNYL® A 216 V33 NATURAL

TECHNICAL DATA SHEET

Revised: February, 2018

TECHNYL® A 216 V33 is a polyamide 66, reinforced with 33% of glass fibre, for injection moulding. This grade offers an excellent combination between thermal and mechanical properties.

GENERAL

Material Status	• Commercial: Active	
Availability	• Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 33% Filler by Weight	
Key Benefits	• Good Dimensional Stability • Good Flow	• Good Mold Release • Translucency
Applications	• Bearing cages • Fittings • Gear wheels • General purpose	• Pulleys • Pumps • Valves • White appliances
Certification/Compliance	• UL QMFZ2	
RoHS Compliance	• RoHS Compliant	
Colors Available	• Grey	• Natural Color
Forms	• Pellets	
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PA66-G33	

PROPERTIES

Typical values of properties are for Natural grades

Physical	Dry	Conditioned	Unit	Test Method
Molding Shrinkage				ISO 294-4
Across Flow	1.1		%	
Flow	0.40		%	
Water Absorption				ISO 62
24 hr, 23°C	0.78		%	
Saturation, 23°C	5.5		%	
Equilibrium, 23°C, 50% RH	1.6		%	
Density	1.38		g/cm³	ISO 1183/A

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	11000	8000	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	205	145	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	3.3	5.0	%	ISO 527-2
Flexural Modulus (23°C)	8800	6200	MPa	ISO 178
Flexural Stress (23°C)	290	190	MPa	ISO 178
Charpy Notched Impact Strength (23°C)	12	16	kJ/m²	ISO 179/1eA

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

SOLVAY
asking more from chemistry®

Mechanical	Dry	Conditioned	Unit	Test Method
Charpy Unnotched Impact Strength (23°C)	89	96	kJ/m²	ISO 179/1eU
Notched Izod Impact				
23°C	80		J/m	ASTM D256
23°C	12	17	kJ/m²	ISO 180
Unnotched Izod Impact Strength (23°C)	85		kJ/m²	ISO 180/1U

Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
1.8 MPa, Unannealed	250		°C	ASTM D648
1.8 MPa, Unannealed	255		°C	ISO 75-2/Af
Melting Temperature	263		°C	ISO 11357-3

Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	6.0E+15	1.0E+13	ohms	IEC 60093
Volume Resistivity	1.0E+15	2.0E+15	ohms·cm	IEC 60093
Electric Strength (2.00 mm)	40	30	kV/mm	IEC 60243-1
Relative Permittivity	3.75	4.00		IEC 60250
Dissipation Factor	0.010	0.11		IEC 60250
Comparative Tracking Index				IEC 60112
Solution A	600	600	V	
Solution B	500	500	V	

Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (1.6 mm)	HB			UL 94
Glow Wire Flammability Index				IEC 60695-2-12
1.6 mm	650		°C	
3.2 mm	750		°C	
Glow Wire Ignition Temperature (1.6 mm)	650		°C	IEC 60695-2-13
Oxygen Index	23		%	ISO 4589-2

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

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

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

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

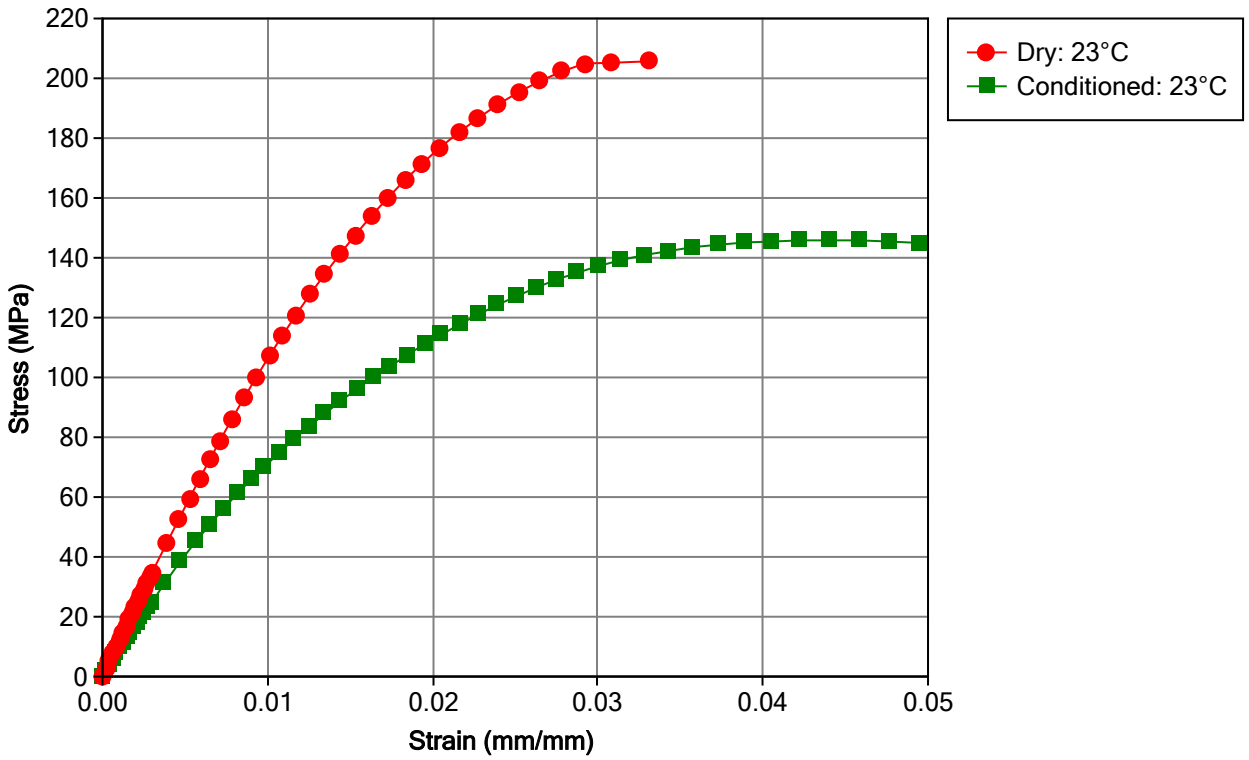
Our customer services are not only concerned with manufacturing and supply of Engineering Plastics products. We are available to assist our customers in finding technical solutions that meet their requirements. Specific support is in particular offered on:

- 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

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

MULTIPOINT DATA

Isothermal Stress vs. Strain (ISO 11403-1)



Notes

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

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