TECHNYL eXten® D 219WFC V30 BLACK

TECHNICAL DATA SHEET

Revised: September, 2018

TECHNYL eXten® D 219WFC V30 Black is a polyamide 6.10, reinforced with 30% of glass fibre, heat stabilized with organic stabilizers, for injection moulding.

This grade offers lower water uptake, higher dimensional stability and enhanced chlorine resistance versus standard PA 6.6. It offers too an enhanced corrosion resistance, a reduction in lead levels versus standard metal solutions and an increase in ease of processing and part design freedom versus metal solutions and other plastics.

It is used for cold and warm water plumbing components including, but not limited to, components in contact with drinking water systems globally where elevated levels of chlorine could be present.

GENERAL

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight	
Additive	• Heat Stabilizer	
Key Benefits	• Partially Bio-based • High Chemical Resistance • Good Dimensional Stability	• Drinking Water Contact Approved • Food Contact Approved • Heat Stabilized (Organic)
Applications	• Consumer and Industrial applications • Flowmeters • Plumbing application	• Valves and pumps • Water pumps
Certification/Compliance	• ACS DGS/VS 4 n° 2000-232 • DVGW W270 • EC 1907/2006 (REACH) • EU No 10/2011	• FDA Food Contact, Unspecified Rating • KTW Guidelines • NSF STD-61 • WRAS BS6920-1: 2000 and 2014
RoHS Compliance	• RoHS Compliant	
Colors Available	• Black	
Forms	• Pellets	
Processing Method	• Injection Molding	
Resin ID (ISO 1043)	• PA610-GF30	

PROPERTIES

Typical values of properties are for Black grades

Solvay Engineering Plastics
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Physical	Dry	Conditioned	Unit	Test Method
Molding Shrinkage				ISO 294-4
Across Flow	0.75		%	
Flow	0.35		%	
Water Absorption				ISO 62
24 hr, 23°C	0.36		%	
Saturation, 23°C	2.4		%	
Density	1.31		g/cm³	ISO 1183/A

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	9200	6700	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	150	107	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	4.1	8.0	%	ISO 527-2/1A
Flexural Modulus				
23°C	7200		MPa	ASTM D790
23°C	7700		MPa	ISO 178
Flexural Strength				
23°C	235		MPa	ASTM D790
23°C	250		MPa	ISO 178
Charpy Notched Impact Strength (23°C)	11		kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	100		kJ/m²	ISO 179/1eU
Notched Izod Impact Strength (23°C)	12		kJ/m²	ISO 180

Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/Af
1.8 MPa, Unannealed	203		°C	
Melting Temperature	225		°C	ISO 11357-3

Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	2.9E+15		ohms	IEC 60093
Volume Resistivity	3.9E+15		ohms·cm	IEC 60093
Electric Strength (2.00 mm)	27		kV/mm	IEC 60243-1
Relative Permittivity	3.40			IEC 60250
Comparative Tracking Index (Solution A)	600		V	IEC 60112

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Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
1.6 mm	HB			
3.2 mm	HB			
Glow Wire Flammability Index (1.6 mm)	700		°C	IEC 60695-2-12

PROCESSING

Injection	Dry	Unit
Drying Temperature	80	°C
Suggested Max Moisture	0.20	%
Rear Temperature	240 to 250	°C
Middle Temperature	245 to 255	°C
Front Temperature	250 to 260	°C
Mold Temperature	60 to 90	°C

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: toys, cosmetics or medical devices.

Relevant drinking water approvals within Europe:
- ACS (Attestation de conformité sanitaire) in France
- KTW (Kunststoffe im Trinkwasser) @ 23°C in Germany
- DVGW (Deutscher Verein des Gas- und Wasserfachs e. V.) W270 in Germany
- WRAS (Water Regulations Advisory Scheme) in Great Britain

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.