

TECHNYL® A 302 NATURAL

Polyamide 66
Solvay Engineering Plastics

Message:

TECHNYL® A 302 is an unreinforced polyamide PA66, medium viscosity, for extrusion and injection moulding. This grade offers three main advantages: high impact resistance, good rigidity and excellent compression resistance. It is designed to be used in food contact applications.

General Information				
Features		High Melt Strength Impact resistance, good Compliance of Food Exposure		
Uses		Industrial application Pipe fittings Furniture Consumer goods application field		
Agency Ratings		EC 1907/2006 (REACH)		
RoHS Compliance		RoHS compliance		
Appearance		Natural color		
Forms		Particle		
Processing Method		Extrusion Injection molding		
Multi-Point Data		Isothermal Stress vs. Strain (ISO 11403-1) Viscosity vs. Shear Rate (ISO 11403-2)		
Resin ID (ISO 1043)		PA66		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm ³	ISO 1183/A
Water Absorption (23°C, 24 hr)	1.3	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	3100	1600	MPa	ISO 527-2/1A
Tensile Stress				ISO 527-2/1A
Yield, 23°C	85.0	60.0	MPa	ISO 527-2/1A
Fracture, 23°C	60.0	60.0	MPa	ISO 527-2/1A
Tensile Strain				ISO 527-2
Yield, 23°C	7.0	25	%	ISO 527-2
Fracture, 23°C	55	--	%	ISO 527-2
Flexural Modulus (23°C)	3000	1400	MPa	ISO 178

Flexural Stress (23°C)	120	75.0	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	6.5	25	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	No Break	--		ISO 179/1eU
Notched Izod Impact (23°C)	5.5	30	kJ/m ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	205	--	°C	ISO 75-2/Bf
1.8 MPa, not annealed	75.0	--	°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
Dielectric Strength (2.00 mm)	27	26	kV/mm	IEC 60243-1
Dissipation Factor	0.020	0.11		IEC 60250
Comparative Tracking Index (Solution A)	600	600	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Oxygen Index	27	--	%	ISO 4589-2
Injection	Dry	Unit		
Drying Temperature	80		°C	
Suggested Max Moisture	0.20		%	
Rear Temperature	265 - 275		°C	
Middle Temperature	270 - 280		°C	
Front Temperature	280 - 285		°C	
Mold Temperature	60 - 80		°C	
Injection instructions				

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 unfilled polyamide, Solvay recommends the use of high alloy steel with a weak chromium content. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (DIN Norm). For Mould Temperature, in the case of parts where the surface roughness is required we can recommend a temperature of 90°C to 120°C with an optimum at 105°C.

The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design

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