Technyl® A 221

PA66 — Solvay Engineering Plastics

Product Texts

Polyamide 6.6, unreinforced
medium viscosity, for injection moulding nucleated for short cycle time

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	3100 / 1600	MPa	ISO 527-1/-2
Stress at break	85 / -	MPa	ISO 527-1/-2
Strain at break	20 / -	%	ISO 527-1/-2
Charpy impact strength (+23°C)	N / -	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	2.5 / -	kJ/m²	ISO 179/1eA

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
Melting temperature (10°C/min)	263 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	80 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	230 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	65 / *	E-6/K	ISO 11359-1/-2
Burning behav. at thickness h	V-2 / *	class	IEC 60695-11-10
Thickness tested	1.6 / *	mm	IEC 60695-11-10
Oxygen index	26 / *	%	ISO 4589-1/-2

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	4.1 / 6	-	IEC 60250
Relative permittivity, 1MHz	2.9 / 3.2	-	IEC 60250
Dissipation factor, 100Hz	200 / 800	E-4	IEC 60250
Dissipation factor, 1MHz	300 / -	E-4	IEC 60250
Volume resistivity	>1E13 / 1E12	Ohm*m	IEC 60093
Surface resistivity	* / 1E12	Ohm	IEC 60093
Electric strength	27 / 26	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
ISO Data			
Water absorption	8.5 / *	%	Sim. to ISO 62
Humidity absorption	1.1 / *	%	Sim. to ISO 62
Density	1140 / -	kg/m³	ISO 1183

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	220	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 10724

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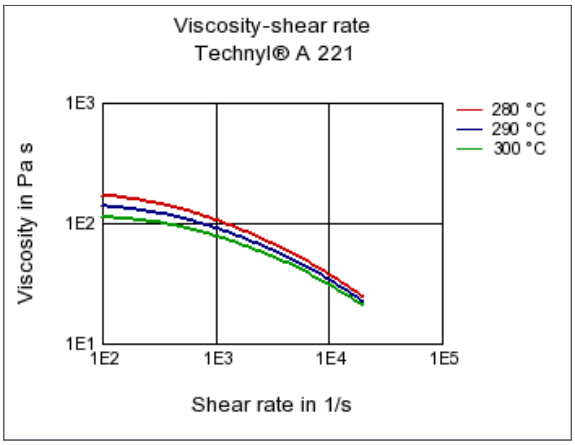
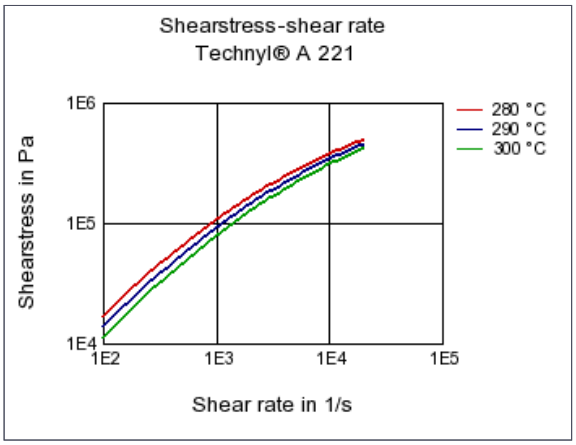
Diagrams

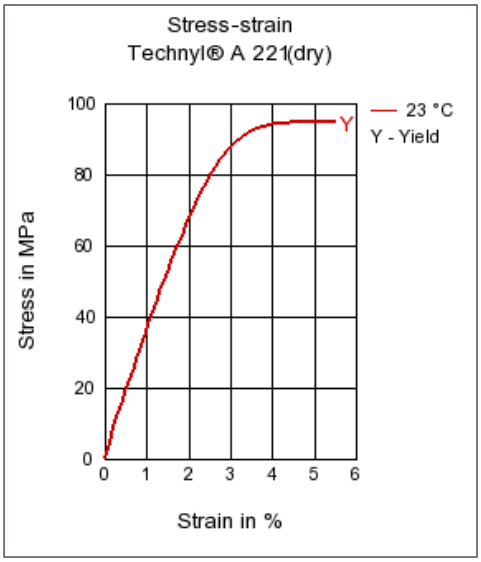
Viscosity-shear rate



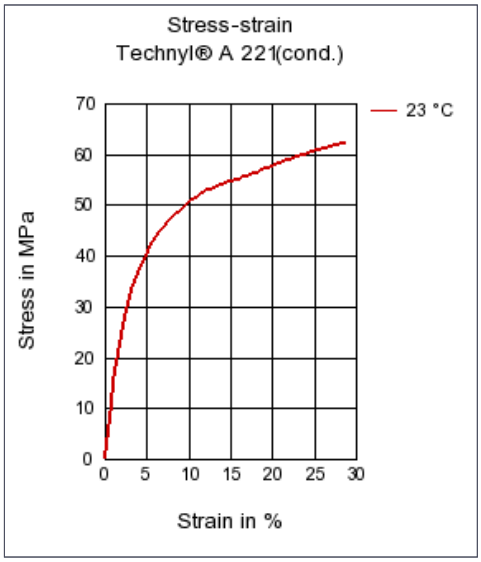
Shearstress-shear rate



Stress-strain



Stress-strain



Characteristics

Processing

Injection Molding

Special Characteristics

Heat stabilized or stable to heat

Other text information

Injection Molding

PROCESSING
Melt temperature: 250°C
Mold temperature: 80°C

Chemical Media Resistance

Acids

- Acetic Acid (5% by mass) (23°C)
- Citric Acid solution (10% by mass) (23°C)
- Lactic Acid (10% by mass) (23°C)
- Hydrochloric Acid (36% by mass) (23°C)
- Nitric Acid (40% by mass) (23°C)
- Sulfuric Acid (38% by mass) (23°C)
- Sulfuric Acid (5% by mass) (23°C)
- Chromic Acid solution (40% by mass) (23°C)

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Bases

- Sodium Hydroxide solution (35% by mass) (23°C)
- Sodium Hydroxide solution (1% by mass) (23°C)
- Ammonium Hydroxide solution (10% by mass) (23°C)

Alcohols

- Isopropyl alcohol (23°C)
- Methanol (23°C)
- Ethanol (23°C)

Hydrocarbons

- n-Hexane (23°C)
- Toluene (23°C)
- iso-Octane (23°C)

Ketones

- Acetone (23°C)

Ethers

- Diethyl ether (23°C)

Mineral oils

- SAE 10W40 multigrade motor oil (23°C)

Standard Fuels

- Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23°C)
- Standard fuel with alcohol (pref. ISO 1817 Liquid 4) (23°C)

Salt solutions

- Zinc Chloride solution (50% by mass) (23°C)

Other

- Ethylene Glycol (50% by mass) in water (108°C)
- 50% Oleic acid + 50% Olive Oil (23°C)
- Water (23°C)
- Deionized water (90°C)