Technyl® A 205F

PA66 Solvay Engineering Plastics

Product Texts

Unreinforced polyamide 66, high fluidity, fast cycling grade, for injection moulding.

TECHNYL® A 205F offers two main advantages: excellent filling qualities and UL 94 V2 under 0.4 mm. It is particularly suitable for the moulding of long parts with thin wall sections, such as:

- Cable ties and fasteners,
- Connectors.

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	3200 / 1600	MPa	ISO 527-1/-2
Yield stress	85 / 50	MPa	ISO 527-1/-2
Yield strain	4 / 10	%	ISO 527-1/-2
Charpy impact strength (+23°C)	N / N	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	4.5 / 8	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)	75 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	220 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	70 / *	E-6/K	ISO 11359-1/-2
Burning behav. at 1.5 mm nom. thickn.	V-2 / *	class	IEC 60695-11-10
Thickness tested	1.6 / *	mm	IEC 60695-11-10
UL recognition	UL / *	-	-
Burning behav. at thickness h	V-2 / *	class	IEC 60695-11-10
Thickness tested	0.4 / *	mm	IEC 60695-11-10
Oxygen index	28.5 / *	%	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 / 750	E-4	IEC 60250
Dissipation factor, 1MHz	300 / 800	E-4	IEC 60250
Volume resistivity	1E13 / 1E11	Ohm*m	IEC 60093
Surface resistivity	* / 1E13	Ohm	IEC 60093
Electric strength	27 / 26	kV/mm	IEC 60243-1
Comparative tracking index	600 / 600	-	IEC 60112

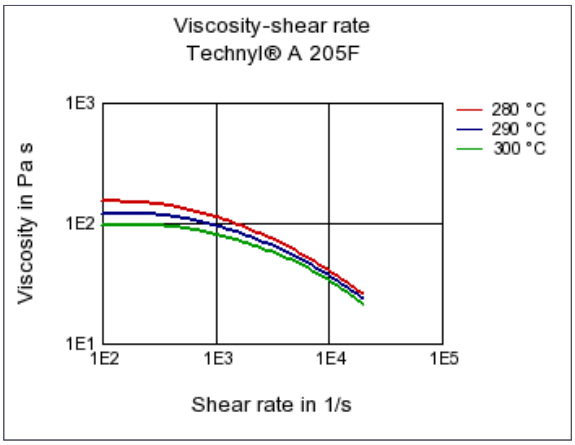
Other properties	dry / cond	Unit	Test Standard
ISO Data			
Water absorption	1.2 / *	%	Sim. to ISO 62
Density	1140 / -	kg/m³	ISO 1183

Material specific properties	dry / cond	Unit	Test Standard
ISO Data			
Viscosity number	140 / *	cm³/g	ISO 307, 1157, 1628

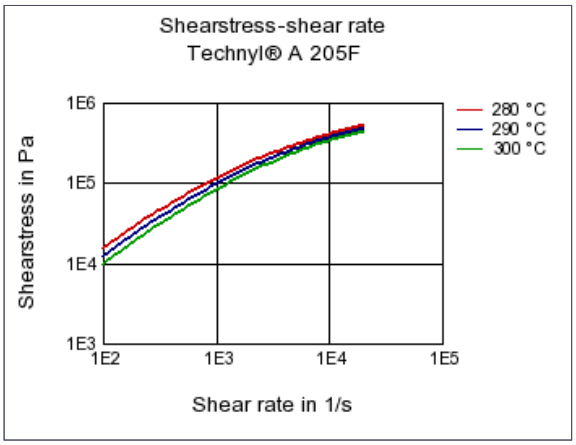
Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	225	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 10724

Diagrams

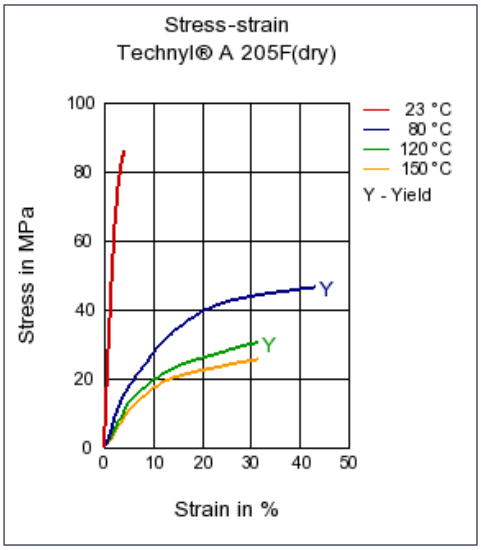
Viscosity-shear rate



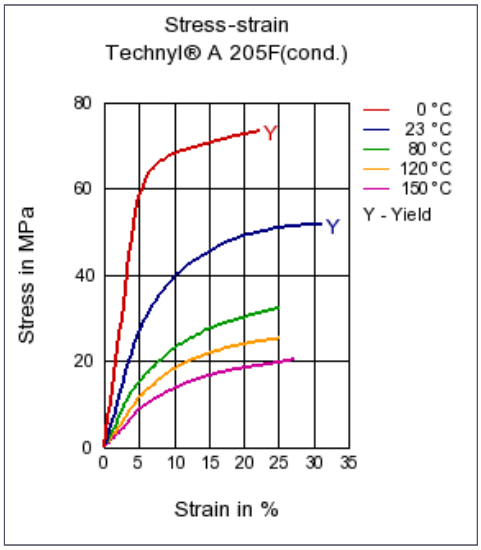
Shearstress-shear rate



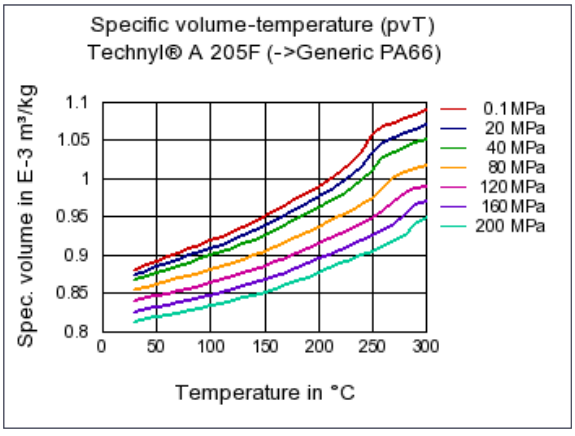
Stress-strain



Stress-strain



Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding

Other text information

Injection Molding

The material is supplied in airtight bags, ready for use. In the case that the virgin material has absorbed moisture, it must be dried to a final moisture content of less than 0,2% with a dehumidified air drying equipment at approx 80°C.

Recommended moulding conditions:

Barrel temperatures:
- feed zone 270 - 275°C
- compres sion zone 280 - 285°C
- front zone 285 - 290°C

Mould temperatures: 60 at 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)

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 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)