


Technyl® A 60 G1 V25

PA66-GF25 FR

Solvay Engineering Plastics

Product Texts

Flame retardant Polyamide PA66 reinforced with 30% of glass fibre, for injection moulding.

This Red Phosphorous and Halogen free flame retardant grade, combines excellent all-round mechanical properties with outstanding flame retardancy (UL 94V0 at 1.5mm) and electrical performance. This product is ideally suited for industrial controls and power distribution applications such as MCBs and contactors.

The long term thermal performance of this grade also make it ideal for under-the-bonnet Auto applications where it can withstand temperatures of 160°C for over 6000hrs. The thermal ageing value for this product in accordance to the IEC 216 RT1 are the following;

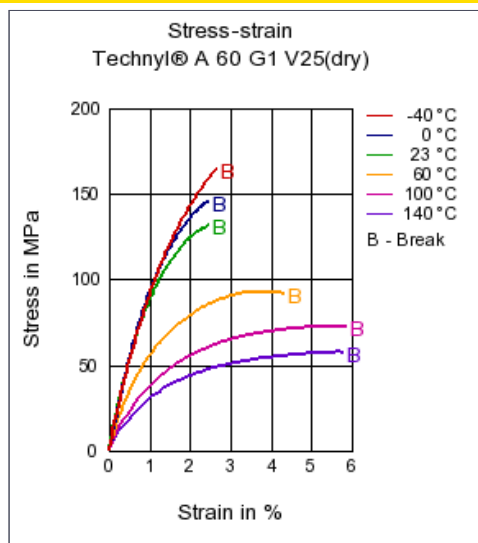
- Impact 160°C @ 6000hrs & 140 @ 20000hrs
- Strength 165°C @ 6000hrs & 145 @ 20000hrs
- Dielectric 160°C @ 6000hrs & 145 @ 20000hrs

This product is available in Natural, Grey and Black. Specific colours and Laser Marking grades optimised for YAG and UV laser types are also available upon request.

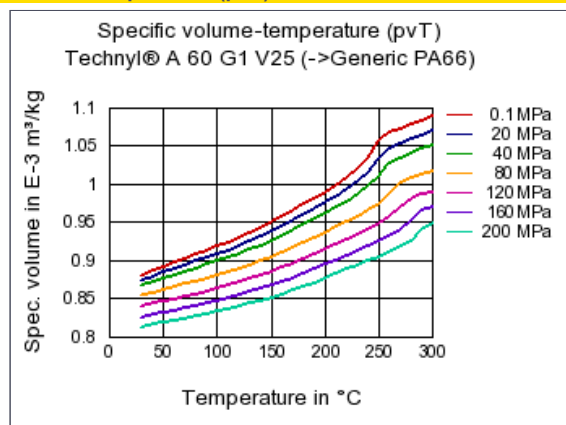
Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	9500 / 6800	MPa	ISO 527-1/-2
Stress at break	142 / 98	MPa	ISO 527-1/-2
Strain at break	3.2 / 4.1	%	ISO 527-1/-2
Charpy impact strength (+23°C)	65 / 75	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	58 / -	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	7.6 / 9.1	kJ/m ²	ISO 179/1eA
Thermal properties			
ISO Data			
Melting temperature (10°C/min)	263 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	240 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	257 / *	°C	ISO 75-1/-2
Burning behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.4 / *	mm	IEC 60695-11-10
Burning behav. 5V at thickness h	5VA / *	class	IEC 60695-11-20
Thickness tested	1.6 / *	mm	IEC 60695-11-20
Oxygen index	33 / *	%	ISO 4589-1/-2
Electrical properties			
ISO Data			
Relative permittivity, 1MHz	3.7 / 4.5	-	IEC 60250
Dissipation factor, 1MHz	160 / 950	E-4	IEC 60250
Electric strength	35 / -	kV/mm	IEC 60243-1
Comparative tracking index	600 / -	-	IEC 60112
Other properties			
ISO Data			
Water absorption	0.83 / *	%	Sim. to ISO 62
Density	1460 / -	kg/m ³	ISO 1183

Diagrams

Stress-strain



Specific volume-temperature (pvT)



Characteristics

Processing

Injection Molding

Special Characteristics

Flame retardant, Heat stabilized or stable to heat

Other text information

Injection Molding

The material is supplied in single 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 260 - 270°C
- compression zone 260 - 270°C
- front zone 260 - 270°C

Mould temperatures: 60 - 80°C

For products containing Flame additives Solvay Engineering Plastics recommends the use of a CR19% C1.9% coating for the steels

to prolong the life time of the processing equipment.

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 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)