

TECHNYL® A 60G1 V25

Product Datasheet - November 2010

Description

Flame retardant Polyamide PA66 reinforced with 25% of glass fibre, for injection moulding.

Product Applications

This Red Phosphorous and Halogen free flame retardant grade, combines excellent all-round mechanical properties with outstanding flame retardancy (UL 5VA at 1.6mm) 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 RTI 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.

Processing

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 260 - 275°C

- compression zone 270 - 280°C

- front zone 275 - 285°C

Mould temperatures: 60 - 80°C

For products containing Flame additives Rhodia recomends the use of a CR19% C1.9% coating for the steels to prolong the life time of the processing equipment.

Safety

Please refer to the Safety Data Sheet NS8QNDE68FS



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Properties	Standards	Unit	Values	
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Physical				
Water absorption (24 h at 23°C)	ISO 62	%	0.83	-
Density	ISO 1183-A	g/cm3	1.38	-
Molding shrinkage Parallel (1) (RHODIA-EP)	RHODIA-EP	%	0.5	-
Molding shrinkage normal or perpendicular (1) (Rhodia EP)	RHODIA-EP	%	0.90	-
Molding Shrinkage Isotropy (Rhodia EP)	RHODIA-EP		0.5	-
Molding shrinkage normal or perpendicular (ISO 294-4)	ISO 294-4	%	0.85	-
Molding shrinkage Parallel (ISO 294-4)	ISO 294-4	%	0.45	-
Mechanical				
Tensile modulus	ISO 527 type 1 A	MPa	9500	6200
Elongation at break	ISO 527 type 1 A	%	3.10	5.20
Tensile strength at break	ISO 527 type 1 A	MPa	147	92
Charpy notched impact strength	ISO 179/1eA	kJ/m2	7.6	9.1
Charpy unnotched impact strength	ISO 179/1eU	kJ/m2	65	85
Charpy unnotched impact strength (-30°C)	ISO 179/1fU	kJ/m2	60	-
Flamability				
Flammability UL 94 (Thickness 0,8 mm)	ISO 1210/UL 94		V0	-
Flammability UL 94 (Thickness 1,6 mm)	ISO 1210/UL 94		V0	-
Flammability UL 94 (Thickness 3,2 mm)	ISO 1210/UL 94		V0	-
Glow wire flammability index (thickness = 0,8)	IEC 60695-2-12	°C	960	-
Glow wire flammability index (thickness = 1,6)	IEC 60695-2-12	°C	960	-
Glow wire flammability index (thickness = 3,2)	IEC 60695-2-12	°C	960	-
Glow wire ignition temperature (thickness = 1,6)	IEC 60695-2-13	°C	775	-
Glow wire ignition temperature (thickness = 3,2)	IEC 60695-2-13	°C	775	-
Limit Oxygen index	ISO 4589		33	-
Thermal				
Melting Temperature	ISO 11357	°C	263	-
Heat deflection temperature, 1,8 Mpa	ISO 75/Af	°C	240	-
Heat deflection temperature 0,45 Mpa	ISO 75/Bf	°C	260	-
MELT MASS-FLOW RATE (MFR) Temperature applied	ISO/FDIS 1133	°C	275	-
MELT MASS-FLOW RATE (MFR) Weight applied	ISO/FDIS 1133	g	5	-
MELT MASS-FLOW RATE RESULT (MFR)	ISO/FDIS 1133	g/10 min	27	-
Electrical				
Relative permittivity	IEC 60250		3.70	4.5
Dissipation factor	IEC 60250		160	950
Volume resistivity	IEC 60093	Ohm.cm	10E12	10E09
Surface resistivity	IEC 60093	Ohm	-	10E13
Dielectric strength	IEC 60243	kV/mm	35	-
Comparative tracking index sol. A	IEC 60112	Volt	600	-

Identification Code : >PA66-GF25 FR(40)<

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