

FRIANYL® A3 V2

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Designed for Electrical applications requiring self-extinguishing properties combined with easy processability and good surface quality, this grade meets the most stringent safety requirements for insulating and accessory parts.

Product information

Resin Identification	PA66	ISO 1043
Part Marking Code	>PA66<	ISO 11469
Continuous Service Temperature	125 °C	IEC 60216-1

Rheological properties

	dry/cond.		
Viscosity number	145 / *	cm ³ /g	ISO 307, 1628
Moulding shrinkage range, parallel	1.2 - 1.6	%	ISO 294-4, 2577
Moulding shrinkage range, normal	0.9 - 1.3	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	3200 / -	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	85 / -	MPa	ISO 527-1/-2
Tensile strain at break, 50mm/min	8 / -	%	ISO 527-1/-2
Charpy impact strength, 23°C	50 / -	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	3 / -	kJ/m ²	ISO 179/1eA
Poisson's ratio	0.37 / - ^[C]		

[C]: Calculated

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	260 / *	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	85 / *	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	200 / *	°C	ISO 75-1/-2

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	V-2 / *	class	IEC 60695-11-10
Burning Behav. at thickness h	V-2 / *	class	IEC 60695-11-10
Thickness tested	0.38 / *	mm	IEC 60695-11-10
UL recognition	yes / *		UL 94
Glow Wire Flammability Index, 0.4mm	960 / -	°C	IEC 60695-2-12
Glow Wire Flammability Index, 3.0mm	960 / -	°C	IEC 60695-2-12
Glow Wire Ignition Temperature, 0.4mm	930 / -	°C	IEC 60695-2-12
Glow Wire Ignition Temperature, 3.0mm	675 / -	°C	IEC 60695-2-13
FMVSS Class	SE		ISO 3795 (FMVSS 302)
Railway classification	R22 / R24		EN 45545-2
Railway classification rating	HL2 / HL2		EN 45545-2

Electrical properties

	dry/cond.		
Comparative tracking index	600 / -		IEC 60112

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Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	2.2/*	%	Sim. to ISO 62
Water absorption, 2mm	8/*	%	Sim. to ISO 62
Density	1140/-	kg/m ³	ISO 1183

Injection

Drying Recommended	yes
Drying Temperature	80 °C
Drying Time, Dehumidified Dryer	2 - 4 h
Processing Moisture Content	≤0.1 %
Melt Temperature Optimum	270 °C
Min. melt temperature	265 °C
Max. melt temperature	285 °C
Screw tangential speed	≤0.2 m/s
Mold Temperature Optimum	80 °C
Min. mould temperature	70 °C
Max. mould temperature	90 °C

Characteristics

Processing	Injection Moulding
Delivery form	Granules
Additives	Flame retardant, Non-halogenated/Red phosphorous free flame retardant
Special characteristics	Flame retardant, Heat stabilised or stable to heat