

# FRIANYL® A3 V2

## FRIANYL®

*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 <sup>3</sup> /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 <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23 °C	3 / -	kJ/m <sup>2</sup>	ISO 179/1eA
Poisson's ratio	0.37 / - <sup>[C]</sup>		

[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 <sup>3</sup>	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