

# FRIANYL® C3 H V0

## FRIANYL®

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

### Product information

Resin Identification	PA666-FR(30)	ISO 1043
Part Marking Code	>PA666-FR(30)<	ISO 11469
Continuous Service Temperature	110 °C	IEC 60216-1

### Rheological properties

Moulding shrinkage range, parallel	1.1 - 1.5 %	ISO 294-4, 2577
Moulding shrinkage range, normal	1.1 - 1.5 %	ISO 294-4, 2577

### Typical mechanical properties

	dry/cond.		
Tensile modulus	3300/-	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	70/-	MPa	ISO 527-1/-2
Tensile strain at break, 50mm/min	10/-	%	ISO 527-1/-2
Flexural modulus	3000/-	MPa	ISO 178
Flexural strength	110/-	MPa	ISO 178
Charpy impact strength, 23°C	60/-	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°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
Charpy notched impact strength, -30°C	2.5/-	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength, 23°C	3.5/-	kJ/m <sup>2</sup>	ISO 180/1A
Poisson's ratio	0.37/- <sup>[C]</sup>		

[C]: Calculated

### Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	255/*	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	80/*	°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-0/*	class	IEC 60695-11-10
Thickness tested	1.6/*	mm	IEC 60695-11-10
Burning Behav. at thickness h	V-0/*	class	IEC 60695-11-10
Thickness tested	0.4/*	mm	IEC 60695-11-10
UL recognition	yes/*		UL 94
Glow Wire Flammability Index, 0.75mm	960/-	°C	IEC 60695-2-12
Glow Wire Flammability Index, 3.0mm	960/-	°C	IEC 60695-2-12
FMVSS Class	SE		ISO 3795 (FMVSS 302)

### Electrical properties

	dry/cond.		
Volume resistivity	1E13/-	Ohm.m	IEC 62631-3-1
Surface resistivity	*/1E13	Ohm	IEC 62631-3-2
Electric strength	18/-	kV/mm	IEC 60243-1
Comparative tracking index	600/-		IEC 60112

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### Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.9/*	%	Sim. to ISO 62
Water absorption, 2mm	7.5/*	%	Sim. to ISO 62
Density	1160/-	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	260 °C
Max. melt temperature	290 °C
Screw tangential speed	≤0.2 m/s
Mold Temperature Optimum	70 °C
Min. mould temperature	60 °C
Max. mould temperature	90 °C

### Characteristics

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