

# FRIANYL® B3 W GF25 V0E BK 9004/YG

## FRIANYL®

*Designed for Electrical applications requiring self-extinguishing properties combined with good mechanical performances, this grade meets the most stringent safety requirements for insulating materials. Good surface quality. Ideal for thick walled parts.*

### Product information

Resin Identification	PA6-GF25FR(40 )	ISO 1043
Part Marking Code	>PA6-GF25FR(40)<	ISO 11469
Continuous Service Temperature	120 °C	IEC 60216-1

### Rheological properties

Moulding shrinkage range, parallel	0.3 - 0.6 %	ISO 294-4, 2577
Moulding shrinkage range, normal	0.6 - 0.9 %	ISO 294-4, 2577

### Typical mechanical properties

	dry/cond.		
Tensile modulus	9000/5500	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	130/80	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	3/8	%	ISO 527-1/-2
Flexural modulus	8500/-	MPa	ISO 178
Flexural strength	200/-	MPa	ISO 178
Charpy impact strength, 23°C	60/60	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	50/50	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	9.5/15	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	7/7	kJ/m <sup>2</sup>	ISO 179/1eA
Poisson's ratio	0.34/0.35 <sup>[C]</sup>		
[C]: Calculated			

### Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	225/*	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	205/*	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	220/*	°C	ISO 75-1/-2

### Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	V-0/*	class	IEC 60695-11-10
UL recognition	yes/*		UL 94
Burning Behav. at thickness h	V-0/*	class	IEC 60695-11-10
Thickness tested	3.2/*	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)

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### Electrical properties

	dry/cond.		
Volume resistivity	1E14 / -	Ohm.m	IEC 62631-3-1
Surface resistivity	* / 1E13	Ohm	IEC 62631-3-2
Electric strength	45 / -	kV/mm	IEC 60243-1
Comparative tracking index, 100 drops	600		IEC 60112

### Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.7 / *	%	Sim. to ISO 62
Water absorption, 2mm	5.7 / *	%	Sim. to ISO 62
Density	1360 / -	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	250 °C
Min. melt temperature	240 °C
Max. melt temperature	260 °C
Screw tangential speed	≤0.2 m/s
Mold Temperature Optimum	80 °C
Min. mould temperature	60 °C
Max. mould temperature	90 °C

### Characteristics

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

### Automotive

OEM  
BMW

#### ADDITIONAL INFORMATION

BMW-Vitesco-Trend-HEV-BM-CSC-Housing-  
Size M FRIANYL B3 W GF25 VOE BK, No  
Spec, Special Part Approval, See Your CE  
Account Manager.