Celanese
The chemistry inside innovation™

FRIANYL® A3 V0XI

FRIANYL®

Designed for Electrical applications requiring self-extinguishing properties combined with excellent ignition resistance, this grade meets the most stringent safety requirements for insulating materials.

Product information

Resin Identification	PA66-FR(17)		ISO 1043
Part Marking Code	>PA66-FR(17)<		ISO 11469
Continuous Service Temperature	120	°C	IEC 60216-1

Rheological properties

	dry/cond.		
Melt volume-flow rate	35 / *	cm^3/10min	ISO 1133
Temperature	270 / *	°C	
Load	2.16 / *	kg	
Moulding shrinkage, parallel	0.9 / -	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.9 / -	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	2900 / -	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	55 / -	MPa	ISO 527-1/-2
Tensile strain at break, 50mm/min	15 / -	%	ISO 527-1/-2
Charpy impact strength, 23°C	>100 / -	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, 23°C	5.5 / -	kJ/m^2	ISO 179/1eA
Izod notched impact strength, 23°C	6 / -	kJ/m^2	ISO 180/1A
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	90 / *	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	220 / *	°C	ISO 75-1/-2
RTI, electrical, 0.4mm	120	°C	UL 746B
RTI, electrical, 0.75mm	130	°C	UL 746B
RTI, electrical, 1.5mm	130	°C	UL 746B
RTI, electrical, 3.0mm	130	°C	UL 746B

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	V-0 / *	class	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, 0.4mm	960 / -	°C	IEC 60695-2-12
Glow Wire Flammability Index, 0.75mm	960 / -	°C	IEC 60695-2-12
Glow Wire Flammability Index, 2.0mm	960 / -	°C	IEC 60695-2-12
Glow Wire Flammability Index, 3.0mm	960 / -	°C	IEC 60695-2-12
Glow Wire Ignition Temperature, 0.75mm	800 / -	°C	IEC 60695-2-13
Glow Wire Ignition Temperature, 0.4mm	825 / -	°C	IEC 60695-2-12
Glow Wire Ignition Temperature, 1.5mm	775 / -	°C	IEC 60695-2-13
Glow Wire Ignition Temperature, 3.0mm	775 / -	°C	IEC 60695-2-13

Celanese
The chemistry inside innovation™

FRIANYL® A3 V0XI

FRIANYL®

FMVSS Class	SE	ISO 3795 (FMVSS 302)

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.4 / *	%	Sim. to ISO 62
Water absorption, 2mm	5.7 / *	%	Sim. to ISO 62
Density	1310 / -	kg/m³	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
Special characteristics	Flame retardant, Heat stabilised or stable to heat

Revised: 2025-02-14 Source: Celanese Materials Database