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	257	°F	IEC 60216-1

Rheological properties

	dry/cond.		
Viscosity number	4010 / *	in³/lb	ISO 307, 1628
Molding shrinkage range, parallel	1.2 - 1.6	%	ISO 294-4, 2577
Molding shrinkage range, normal	0.9 - 1.3	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	464000 / -	psi	ISO 527-1/-2
Tensile stress at yield, 50mm/min	12000 / -	psi	ISO 527-1/-2
Tensile strain at break, 50mm/min	8 / -	%	ISO 527-1/-2
Charpy impact strength, 23°C	23.8 / -	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	1.43 / -	ftlb/in²	ISO 179/1eA

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	500 / *	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	185 / *	°F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	392 / *	°F	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	0.0150 / *	in	IEC 60695-11-10
UL recognition	yes / *		UL 94
Glow Wire Flammability Index, 0.4mm	1760 / -	°F	IEC 60695-2-12
Glow Wire Flammability Index, 3.0mm	1760 / -	°F	IEC 60695-2-12
Glow Wire Ignition Temperature, 0.4mm	1710 / -	°F	IEC 60695-2-12
Glow Wire Ignition Temperature, 3.0mm	1250 / -	°F	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

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	2.2 / *	%	Sim. to ISO 62
Water absorption, 2mm	8 / *	%	Sim. to ISO 62
Density	0.0412 / -	lb/in³	ISO 1183

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Injection

Drying Recommended	yes	
Drying Temperature	176	°F
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.1	%
Melt Temperature Optimum	518	°F
Min. melt temperature	509	°F
Max. melt temperature	545	°F
Max. screw tangential speed	≤0.2	m/s
Mold Temperature Optimum	176	°F
Min. mold temperature	158	°F
Max. mold temperature	194	°F

Characteristics

Processing	Injection Molding
Additives	Flame retardant, Non-halogenated/Red phosphorus free flame retardant
Special characteristics	Flame retardant, Heat stabilized or stable to heat

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

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