Celanese
The chemistry inside innovation™

FRIANYL® A3 RV0 GY 7012/H

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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 materials.

Product information

Resin Identification	PA66 FR(30)		ISO 1043
Part Marking Code	>PA66 FR(30)<		ISO 11469
Continuous Service Temperature	130	°C	IEC 60216-1

Rheological properties

	dry/cond.		
Viscosity number	140 / *	cm^3/g	ISO 307, 1628
Moulding shrinkage, parallel	1.2 / -	%	ISO 294-4, 2577
Moulding shrinkage range, parallel	1 - 1.4	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.2 / -	%	ISO 294-4, 2577
Moulding shrinkage range, normal	1 - 1.4	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	3500 / -	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	81 / -	MPa	ISO 527-1/-2
Tensile strain at break, 50mm/min	13 / -	%	ISO 527-1/-2
Charpy impact strength, 23°C	N / -	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, 23°C	3 / -	kJ/m^2	ISO 179/1eA
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	85 / *	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	185 / *	°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
Glow Wire Ignition Temperature, 0.75mm	775 / -	°C	IEC 60695-2-13
Glow Wire Ignition Temperature, 3.0mm	775 / -	°C	IEC 60695-2-13

Electrical properties

	dry/cond.		
Volume resistivity	1E13 / -	Ohm.m	IEC 62631-3-1
Comparative tracking index	600 / -		IEC 60112

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Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.8 / *	%	Sim. to ISO 62
Water absorption, 2mm	6.5 / *	%	Sim. to ISO 62
Density	1170 / -	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	275	°C
Min. melt temperature	265	°C
Max. melt temperature	285	°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

Revised: 2024-08-16 Source: Celanese Materials Database