

FRIANYL® A3 V0

FRIANYL®

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+PA6) FR(30)	ISO 1043
Part Marking Code	>(PA66+PA6) FR(30)<	ISO 11469
Continuous Service Temperature	125 °C	IEC 60216-1

Rheological properties

	dry/cond.		
Melt volume-flow rate	180/*	cm ³ /10min	ISO 1133
Temperature	275/*	°C	
Load	5/*	kg	
Viscosity number	135/*	cm ³ /g	ISO 307, 1628
Moulding shrinkage range, parallel	1.3 - 1.7	%	ISO 294-4, 2577
Moulding shrinkage range, normal	1.3 - 1.7	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	3400/-	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	75/-	MPa	ISO 527-1/-2
Tensile strain at break, 50mm/min	10/-	%	ISO 527-1/-2
Charpy impact strength, 23°C	80/-	kJ/m ²	ISO 179/1eU
Charpy impact strength, -40°C	97/-	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	3/-	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -40°C	2.6/-	kJ/m ²	ISO 179/1eA
Ball indentation hardness, H 961/30	165/-	MPa	ISO 2039-1
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	1.5/*	mm	IEC 60695-11-10
UL recognition	yes/*		UL 94
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, 3.0mm	960/-	°C	IEC 60695-2-12
Glow Wire Ignition Temperature, 0.75mm	775/-	°C	IEC 60695-2-13

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Electrical properties

	dry/cond.		
Volume resistivity	1E13/-	Ohm.m	IEC 62631-3-1
Surface resistivity	*/1E13	Ohm	IEC 62631-3-2
Electric strength	20/-	kV/mm	IEC 60243-1
Comparative tracking index, 100 drops	600		IEC 60112

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.8/*	%	Sim. to ISO 62
Water absorption, 2mm	6.9/*	%	Sim. to ISO 62
Density	1160/-	kg/m ³	ISO 1183

Injection

Melt Temperature Optimum	275 °C
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Characteristics

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