



FRIANYL® A3 GF20 V0

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.

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Resin Identification	(PA66+PA6)-G	` ,	ISO 1043		
Part Marking Code	>(PA66+PA6)-	• •	ISO 11469		
Continuous Service Temperature	13	30 °C	IEC 60216-1		
Rheological properties					
Moulding shrinkage range, parallel	0.3 - 0	7 %	ISO 294-4, 2577		
Moulding shrinkage range, normal	0.7 - 1		ISO 294-4, 2577		
Wodding of mago rango, normal	0.7 1	.1 70	100 201 1, 2017		
Typical mechanical properties	dry/cond.				
Tensile modulus	7700/-	MPa	ISO 527-1/-2		
Tensile stress at break, 5mm/min	128/-	MPa	ISO 527-1/-2		
Tensile strain at break, 5mm/min	3.5/-	%	ISO 527-1/-2		
Charpy impact strength, 23°C	50/-	kJ/m²	ISO 179/1eU		
Charpy impact strength, -30°C	45/-	kJ/m²	ISO 179/1eU		
Charpy notched impact strength, 23°C	8.5/-	kJ/m²	ISO 179/1eA		
Charpy notched impact strength, -30°C	6.5/-	kJ/m²	ISO 179/1eA		
Ball indentation hardness, H 961/30	210/-	MPa	ISO 2039-1		
Poisson's ratio	0.34/- ^[C]				
[C]: Calculated	0.0 .,				
[O]. Odlobiated					
Thermal properties	dry/cond.				
Melting temperature, 10°C/min	260/*	°C	ISO 11357-1/-3		
Temperature of deflection under load, 1.8 MPa	210/*	°C	ISO 75-1/-2		
RTI, electrical, 0.75mm	130	°C	UL 746B		
RTI, electrical, 1.5mm	130	°C	UL 746B		
RTI, electrical, 3.0mm	130	°C	UL 746B		
RTI, impact, 0.75mm	90	°C	UL 746B		
RTI, impact, 1.5mm	90	°C	UL 746B		
RTI, impact, 3.0mm	90	°C	UL 746B		
RTI, strength, 0.75mm	130	°C	UL 746B		
RTI, strength, 1.5mm	130/*	°C	UL 746B		
RTI, strength, 3.0mm	130	°C	UL 746B		
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Flammability	dry/cond.				
Burning Behav. at thickness h	V-0/*	class	IEC 60695-11-10		
Thickness tested	0.8/*	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	750/-	°C	IEC 60695-2-13		
Glow Wire Ignition Temperature, 1.5mm	750/-	°C	IEC 60695-2-13		
Glow Wire Ignition Temperature, 3.0mm	800/-	°C	IEC 60695-2-13		
FMVSS Class	SE	-	ISO 3795 (FMVSS 302)		
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Revised: 2025-02-14 Source: Celanese Materials Database





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Electrical properties

dry/cond.

dry/cond.

Physical/Other properties

Humidity absorption, 2mm 1.5/* % Sim. to ISO 62 Water absorption, 2mm 5.3/* % Sim. to ISO 62 Density 1320/- kg/m^3 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	285	°C
Min. melt temperature	270	°C
Max. melt temperature	300	°C
Screw tangential speed	≤0.2	m/s
Mold Temperature Optimum	80	°C
Min. mould temperature	60	°C
Max. mould temperature	100	°C

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

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NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colourants or other additives may cause significant variations in data values. Properties of moulded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design conditions and environmental exposure. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, pr

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