

FRIANYL[®] A3 RV0 L BK 9005

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

Pheological properties dry/cond. Viscosity number 120/* cm³/g ISO 307, 1628 Moulding shrinkage, parallel 1.2/- % ISO 294-4, 2577 Moulding shrinkage, normal 1.2/- % ISO 294-4, 2577 Moulding shrinkage, normal 1.2/- % ISO 294-4, 2577 Moulding shrinkage, normal 1.2/- % ISO 294-4, 2577 Moulding shrinkage range, normal 1 - 1.4 % ISO 294-4, 2577 Moulding shrinkage range, normal 1 - 1.4 % ISO 294-4, 2577 Typical mechanical properties dry/cond. ISO 527-1/-2 Tensile stress at yield, 50mm/min 70/- MPa ISO 527-1/-2 Tensile strein at break, 50mm/min 3/- % ISO 527-1/-2 Charpy impact strength, 23°C 2.8/- kJ/m² ISO 179/1eU Charpy notched impact strength, 23°C 2.8/- kJ/m² ISO 11357-1/-3 IC: Calculated ISO 757/-2 ISO 757/-2 ISO 751/-2 Ball pressure test 175/- °C IEC 60695-11-10 <t< th=""><th>Resin Identification Part Marking Code Continuous Service Temperature</th><th>PA66-FR(30) >PA66-FR(30)< 130</th><th>•</th><th>ISO 1043 ISO 11469 IEC 60216-1</th></t<>	Resin Identification Part Marking Code Continuous Service Temperature	PA66-FR(30) >PA66-FR(30)< 130	•	ISO 1043 ISO 11469 IEC 60216-1
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FRIANYL[®] A3 RV0 L BK 9005 **FRIANYL®**

Electrical properties

Comparative tracking index, 100 drops	6	600	IEC 60112
Physical/Other properties	dry/cond.		
Humidity absorption, 2mm Water absorption, 2mm Density	2/* 7.3/* 1160/-	% % kg/m³	Sim. to ISO 62 Sim. to ISO 62 ISO 1183
Characteristics			

Jnaracteristics

Processing	Injection Moulding
Delivery form	Granules
Additives	Flame retardant
Special characteristics	Flame retardant, Heat stabilised or stable to heat

Additional information

Injection molding

Preprocessing

PA materials, stocked in a moisture-proof packaging, can be processed without drying; however, it is always recommended drying the product that comes from a large package (e.g. Octabin). The moisture content suggested for the injection molding process should be lower than 0.15%, according to the grade and to the molded part characteristics. The materials containing flame retardants should have moisture content below 0.10%. Red phosphorous containing grades must always be dried below 0.08%. The drying time depends on the moisture content and the drying conditions. Typically, 4-8 hours at 80-90 °C using dehumidified air (dew point of -20°C) are suitable conditions for a starting moisture content of 0.20%-0.40%.

Processing

The following conditions apply to a standard injection molding process. Machine temperatures: barrel 265-290 °C (PA66), 235-270 °C (PA6), nozzle and hot runners up to 300 °C (up to 290 °C products with flame retardants). Mold temperatures: 60-80°C, (80-100°C highly reinforced grades). Back pressure: typically, 5-10 bar (hydraulic pressure). Temperatures exceeding 300°C and long residence time could lead to additives degradation and brittleness of the material. In case of gas generation in the melt, please verify moisture content and processing temperatures. Usage of regrind is possible depending on the molded part characteristics. For further details, please refer to the document 'Instructions for injection molding' or contact our technical support team.

Postprocessing

PA materials reach their final performance with a water content of about 1.5 to 3.5% by weight, depending on the type. This percentage corresponds to the point of equilibrium between the rates of absorption and desorption of moisture. After





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molding, in favorable environmental conditions, a part can quickly absorbs moisture up to 0.5-1.0%, while the equilibrium will be reached during its life. A conditioning treatment can accelerate further the initial water absorption of the molded parts. Conditioning is usually carried out in hot and humid environment (for example 50 °C, 100% RH), inside climatic chambers. Slight dimensional variations (increase in volume due to the water absorbed) must be considered, especially in unfilled grades. Post-treatments of parts may also include the annealing (60-80 °C in oven, up to four hours). This procedure can be useful to relax any internal stresses.

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Automotive

OEM VW Group STANDARD VW 50133

ADDITIONAL INFORMATION

*Best Fitting Grade To PA66-1-A, Not Officially Approved

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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 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 as a promise or guarantee of specific properties of our groucts. 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, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the

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