

# FRIANYL® A3 RV0 WT 9010/P

## FRIANYL®

Car industry, Household appliances, Electrical devices.

### 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                   | 135/*     | cm <sup>3</sup> /g | ISO 307, 1628   |
| Moulding shrinkage range, parallel | 1.4 - 1.7 | %                  | ISO 294-4, 2577 |
| Moulding shrinkage range, normal   | 1.2 - 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    | 80/-                  | MPa               | ISO 527-1/-2 |
| Tensile strain at break, 50mm/min    | 7/-                   | %                 | ISO 527-1/-2 |
| Charpy impact strength, 23°C         | 60/-                  | kJ/m <sup>2</sup> | ISO 179/1eU  |
| Charpy notched impact strength, 23°C | 3.5/-                 | kJ/m <sup>2</sup> | ISO 179/1eA  |
| Ball indentation hardness, H 961/30  | 175/-                 | MPa               | ISO 2039-1   |
| Poisson's ratio                      | 0.37/- <sup>[C]</sup> |                   |              |

[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                       | 0.25/*    | 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                  | 1160/-    | kg/m <sup>3</sup> | 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    |
| Ejection temperature            | 220 °C   |

### Characteristics

|                         |                    |
|-------------------------|--------------------|
| Processing              | Injection Moulding |
| Additives               | Flame retardant    |
| Special characteristics | Flame retardant    |