

FRIANYL® A3 RV0

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-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 | 145 / * | 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 / 1300 | MPa | ISO 527-1/-2 |
| Tensile stress at yield, 50mm/min | 80 / 50 | MPa | ISO 527-1/-2 |
| Tensile strain at yield, 50mm/min | 3.5 / - | % | ISO 527-1/-2 |
| Tensile strain at break, 50mm/min | 10 / >50 | % | ISO 527-1/-2 |
| Charpy impact strength, 23 °C | 50 / - | 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 | 80 / * | °C | ISO 75-1/-2 |
| Temperature of deflection under load, 0.45 MPa | 190 / * | °C | ISO 75-1/-2 |
| Ball pressure test | 175 / - | °C | IEC 60695-10-2 |

Flammability

| | dry/cond. | | |
|--------------------------------------|-----------|-------|----------------------|
| Burning Behav. at 1.5mm nom. thickn. | V-0 / * | class | 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 |
| FMVSS Class | SE | | ISO 3795 (FMVSS 302) |

Electrical properties

| | dry/cond. | | |
|---------------------------------------|-----------|-------|---------------|
| Volume resistivity | 1E12 / - | Ohm.m | IEC 62631-3-1 |
| Comparative tracking index, 100 drops | 600 | | IEC 60112 |

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Physical/Other properties

| | dry/cond. | | |
|--------------------------|-----------|-------------------|----------------|
| Humidity absorption, 2mm | 2.1 / * | % | Sim. to ISO 62 |
| Water absorption, 2mm | 7.4 / * | % | Sim. to ISO 62 |
| Density | 1160 / - | 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 | 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 |
| Delivery form | Granules |
| Additives | Flame retardant, Non-halogenated/Red phosphorous free flame retardant |
| Special characteristics | Flame retardant, Heat stabilised or stable to heat |

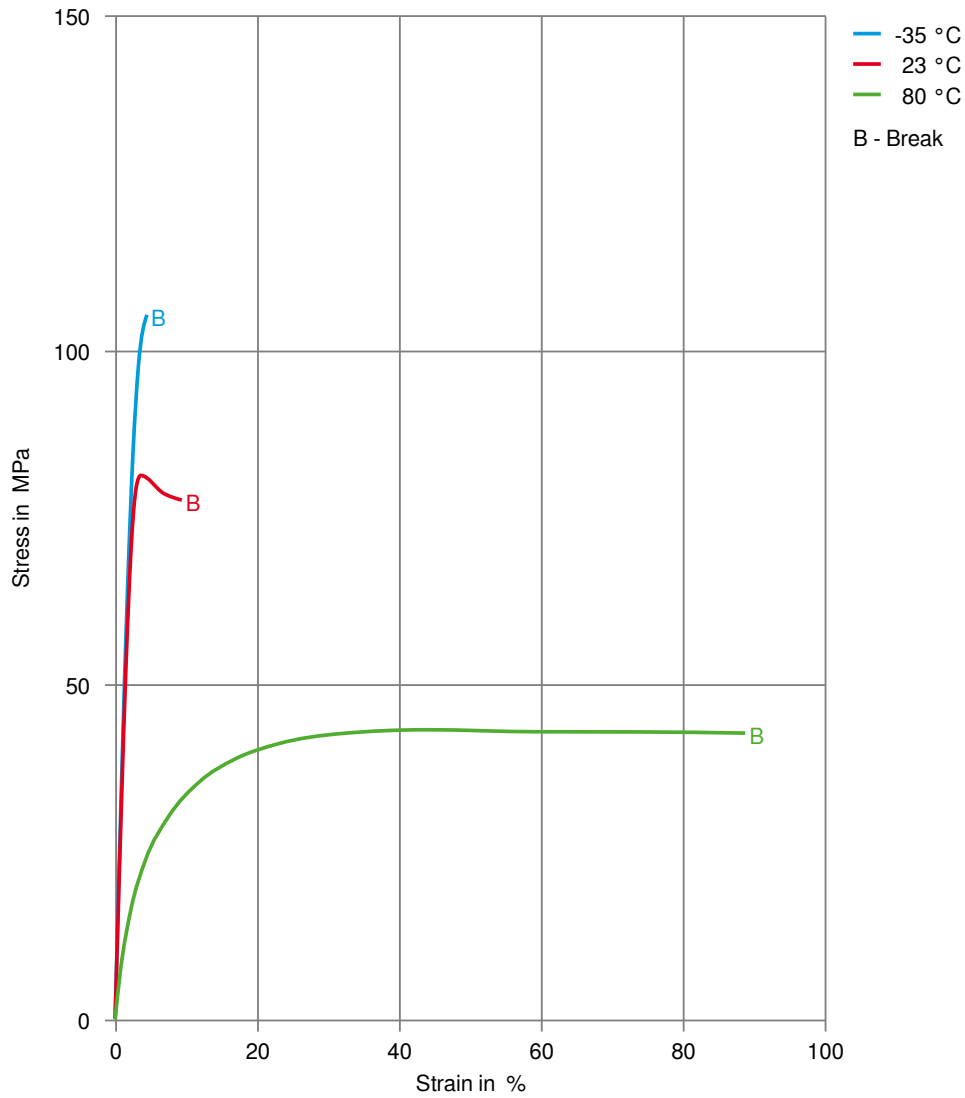
Automotive

| OEM | STANDARD | ADDITIONAL INFORMATION |
|------------|----------------------------|--|
| Stellantis | B62 0300 / 61/217E/214M/C4 | 01378_20_00621 |
| VW Group | VW 50133 | *Best Fitting Grade To PA66-1-A, Not Officially Approved |

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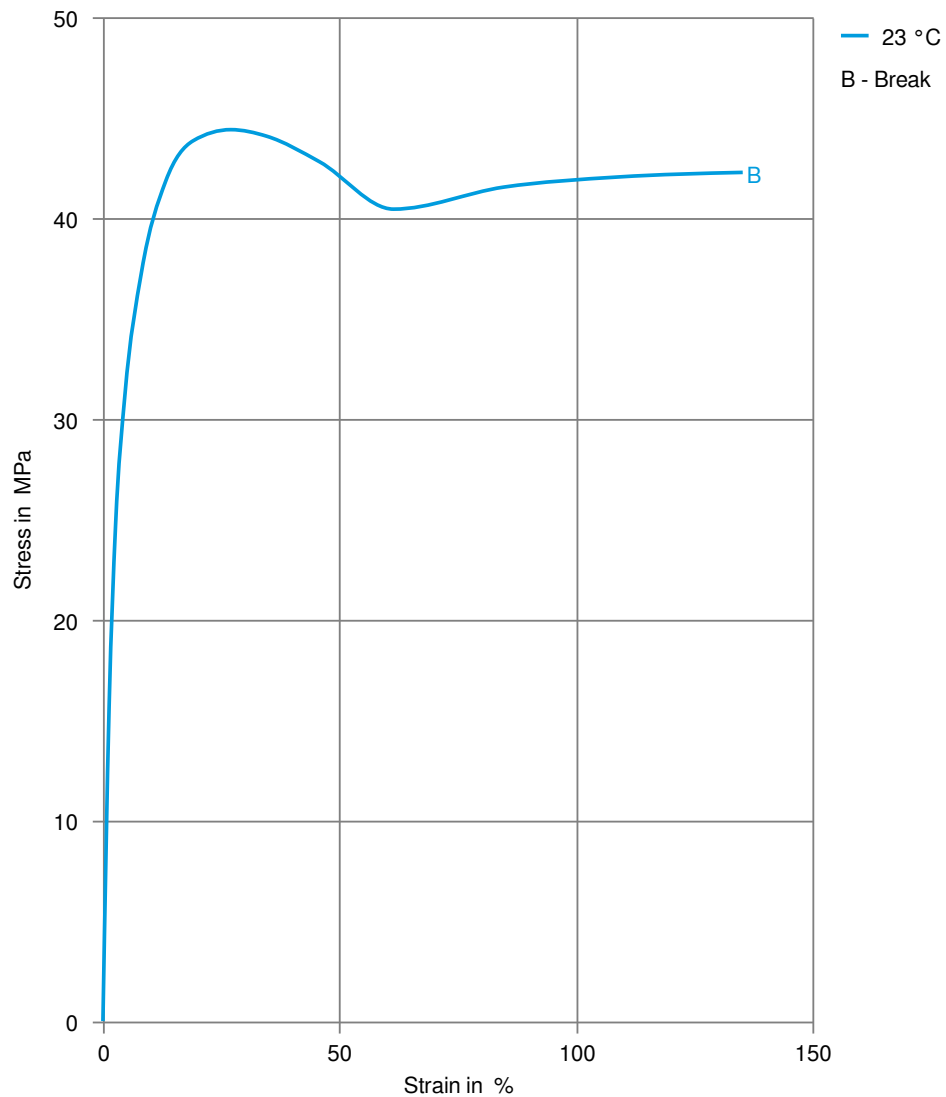
Stress-strain (dry)



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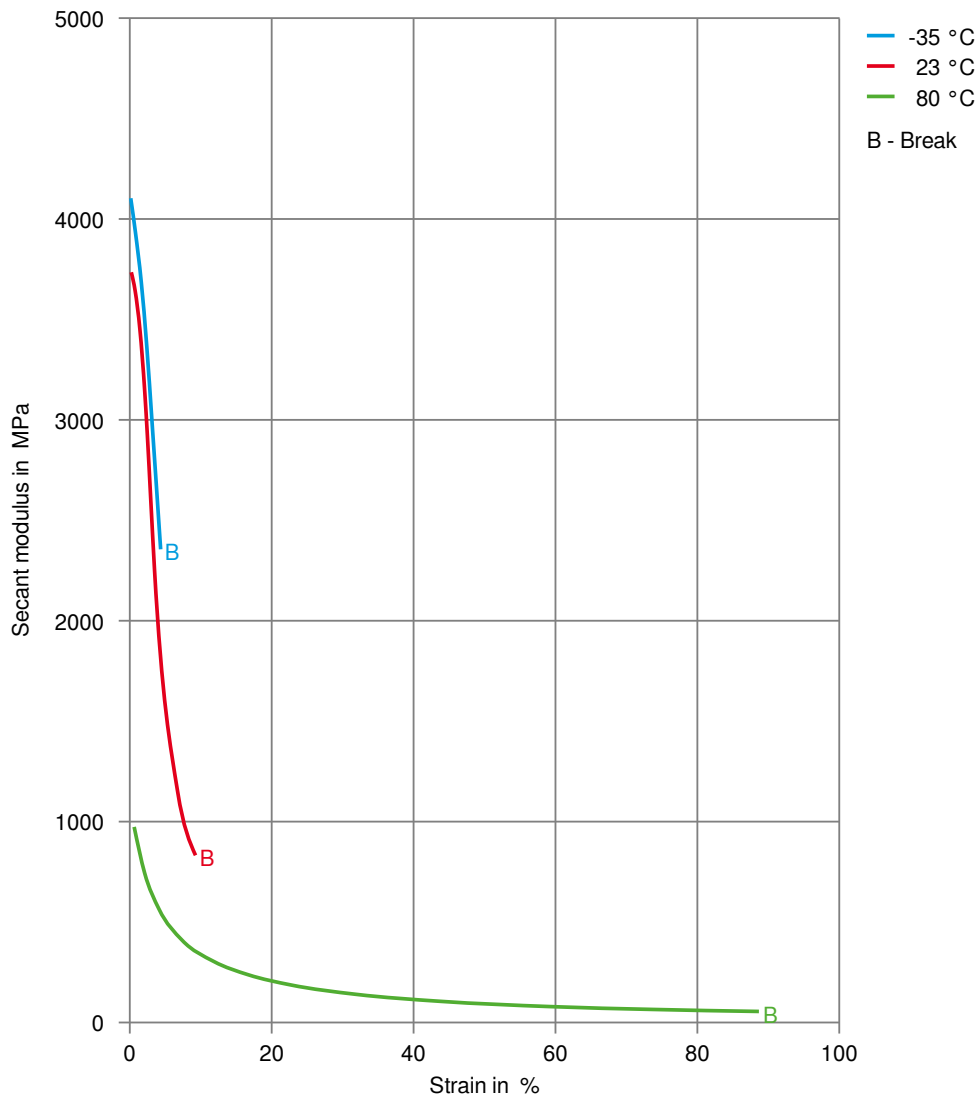
Stress-strain (cond.)



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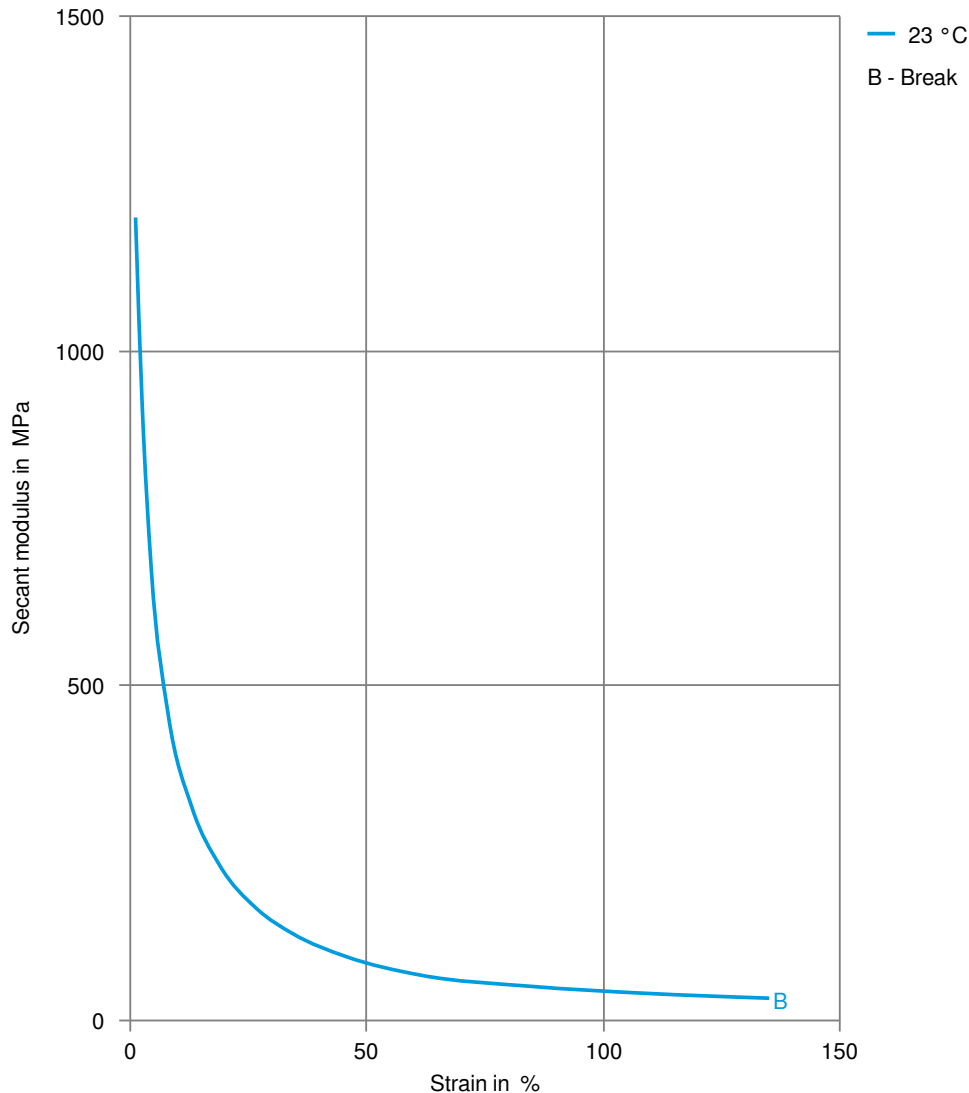
Secant modulus-strain (dry)



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Secant modulus-strain (cond.)



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