

TECHNICAL DATA SHEET

TECHNYL PROTECT C 60G1 V30 NC
(Previously DOMAMID FR 6G30VOE NC)

Polyamide 6, 30% glass fiber reinforced, halogen and red phosphorus free flame retardant, heat-aging stabilized, for injection moulding, natural color

General

| | | |
|-----------------------|--------------------------------|---|
| Feature | UL V0 Heat-aging stabilized | Halogen and red phosphorus free flame retardant |
| Polymer type | PA6 (Polyamide 6) | |
| Processing technology | Injection molding | |
| Certification | RoHS | UL-Yellow Card |

Product identification

| | |
|-----------------------|----------------------------|
| ISO 1043 abbreviation | PA6-GF30 FR(40) |
| ISO 16396 designation | PA6,GF30FR(40),M1H,S14-100 |

| | Condition | Standard | Unit | Value |
|-----------------------------|-----------|-----------------|-------|-----------|
| Physical properties | | | | |
| Density | | ISO 1183 | g/cm³ | 1.41 |
| Molding shrinkage, parallel | | ISO 294-4, 2577 | % | 0.2 - 0.4 |
| Molding shrinkage, normal | | ISO 294-4, 2577 | % | 0.5 - 0.7 |
| Viscosity number | 96% H2SO4 | ISO 307 | cm³/g | 145 |

| | | | | |
|---------------------------------------|----------|--------------|-------|--------------|
| Mechanical properties | | | | dam / cond.* |
| Tensile modulus | 1 mm/min | ISO 527-1/-2 | MPa | 10500 / 6500 |
| Stress at break | 5 mm/min | ISO 527-1/-2 | MPa | 145 / 95 |
| Strain at break | 5 mm/min | ISO 527-1/-2 | % | 3 / 5 |
| Flexural modulus, ISO 178 | 2 mm/min | ISO 178 | MPa | 9900 / 6100 |
| Flexural strength, ISO 178 | 2 mm/min | ISO 178 | MPa | 215 / 140 |
| Charpy impact strength, +23°C | +23°C | ISO 179/1eU | kJ/m² | 55 / 60 |
| Charpy notched impact strength, +23°C | +23°C | ISO 179/1eA | kJ/m² | 9 / 12 |
| Izod impact strength, +23°C | +23°C | ISO 180/1U | kJ/m² | 55 / 60 |
| Izod notched impact strength, +23°C | +23°C | ISO 180/1A | kJ/m² | 9 / 11 |

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| | Condition | Standard | Unit | Value |
|--|--------------|-------------|------|-------|
| Thermal properties | | | | |
| Melting temperature, 10°C/min | | ISO 11357-1 | °C | 221 |
| Temp. of deflection under load, 0.45 MPa | 0.45 MPa | ISO 75 | °C | 215 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75 | °C | 205 |
| Vicat softening temperature | 50°C/h - 50N | ISO 306 | °C | 210 |

Electrical properties

| | | | | |
|--------------------------------|------------|---------------|-------|--------|
| Volume resistivity | | IEC 62631-3-1 | ohm.m | 1E+016 |
| Surface resistivity | | IEC 62631-3-1 | ohm | 1E+014 |
| Comparative tracking index | Solution A | IEC 60112 | V | 600 |
| CTI performance level category | | Sol A | | PLC 0 |

Burning behaviour

| | | | | |
|---|---|----------------|----|--------------|
| UL Yellow Card availability  | Click here to have access to the UL Yellow Card → E170540-103930220 | | | |
| Flammability, 0.75 mm | 0.75 mm | UL 94 | | V0 |
| Flammability, 1.5 mm | 1.5 mm | UL 94 | | V0 |
| Flammability, 3.0 mm | 3.0 mm | UL 94 | | V0 |
| Glow-wire flammability index, GWFI | 1-3 mm | IEC 60695-2-12 | °C | 960 |
| Glow-wire ignition temperature, GWIT | 1-3 mm | IEC 60695-2-13 | °C | 775 |
| Burning rate, FMVSS, Thickness 1 mm | | FMVSS 302 | | < 100 mm/min |

Test run at 23°C if not differently specified, DAM state (dry as moulded).
*: conditioned according to ISO 1110

Processing conditions

| | |
|-------------------------------|---|
| Drying temperature/time | 75-85°C / 2-4h (with dew point of dried air < -30 °C) |
| Recommended melt temperature | 240 - 270 °C |
| Recommended mould temperature | 80 - 100 °C |

These parameters are typical of the product but should be related to the type of machinery used and to the type of moulded part.

Disclaimer

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