

TECHNICAL DATA SHEET

TECHNYL PROTECT A 50X3 NC
(Previously DOMAMID FR 66VOM)

Polyamide 66, heat-aging stabilized, halogen and red phosphorus free flame retardant, for injection moulding

General

| | | |
|-----------------------|--------------------------------|---|
| Feature | UL V0 Heat-aging stabilized | Halogen and red phosphorus free flame retardant |
| Polymer type | PA66 (Polyamide 66) | |
| Processing technology | Injection molding | |
| Certification | RoHS | EC 1907/2006 (REACH) |
| Colors available | Black Grey | Natural |
| Forms | Pellets | |

Product identification

| | |
|-----------------------|-------------------------|
| ISO 1043 abbreviation | PA66 FR(30) |
| ISO 16396 designation | PA66,FR(30),M1H,S14-040 |

| Condition | Standard | Unit | Value |
|-----------|----------|------|-------|
|-----------|----------|------|-------|

Physical properties

| | Condition | Standard | Unit | Value |
|-----------------------------|-----------|-----------------|-------------------|-----------|
| Density | | ISO 1183 | g/cm ³ | 1.17 |
| Molding shrinkage, parallel | | ISO 294-4, 2577 | % | 1.1 - 1.3 |
| Molding shrinkage, normal | | ISO 294-4, 2577 | % | 1.1 - 1.3 |

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| | Condition | Standard | Unit | Value |
|---------------------------------------|-----------|--------------|-------------------|---------------------|
| Mechanical properties | | | | dam / cond.* |
| Tensile modulus | 1 mm/min | ISO 527-1/-2 | MPa | 3700 / 1700 |
| Strain at break | 50 mm/min | ISO 527-1/-2 | % | 15 / 50 |
| Yield stress | 50 mm/min | ISO 527-1/-2 | MPa | 85 / 50 |
| Flexural modulus, ISO 178 | 2 mm/min | ISO 178 | MPa | 3400 / 1600 |
| Flexural strength, ISO 178 | 2 mm/min | ISO 178 | MPa | 125 / 60 |
| Charpy impact strength, +23°C | +23°C | ISO 179/1eU | kJ/m ² | 75 / NB |
| Charpy notched impact strength, +23°C | +23°C | ISO 179/1eA | kJ/m ² | 4 / 8.5 |
| Charpy notched impact strength, -30°C | -30°C | ISO 179/1eA | kJ/m ² | 3.5 / - |
| Izod impact strength, +23°C | +23°C | ISO 180/1U | kJ/m ² | 65 / 125 |
| Izod notched impact strength, +23°C | +23°C | ISO 180/1A | kJ/m ² | 3.5 / 8 |

Thermal properties

| | | | | |
|--|--------------|-------------|----|-----|
| Melting temperature, 10°C/min | | ISO 11357-1 | °C | 262 |
| Temp. of deflection under load, 0.45 MPa | 0.45 MPa | ISO 75 | °C | 210 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75 | °C | 80 |
| Vicat softening temperature | 50°C/h - 50N | ISO 306 | °C | 240 |

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

| | | | | |
|--------------------------------------|---------|----------------|----|--------------|
| Flammability, 0.75 mm | 0.75 mm | UL 94 | | V0 |
| Flammability, 1.5 mm | 1.5 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 | 750 |
| 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), valid for natural colored products.
*: 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 | 260 - 290 °C |
| Recommended mould temperature | 60 - 80 °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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