

TECHNICAL DATA SHEET

DOMONYL 1850W61 BK-1

DOMONYL 1850W61 BK-1 is a polyamide 6, reinforced with 40% of glass fibre, lubricated, for injection molding. For America availability only.

General

| | | |
|-----------------------|--|----------------------|
| Certifications | RoHS | EC 1907/2006 (REACH) |
| Polymer type | PA6 | |
| Feature | improved tribological properties low friction | lubricated |
| Colors available | black | |
| Forms | pellets | |
| Processing technology | injection moulding | |

Product identification

| | |
|-----------------------|---------------------|
| ISO 1043 abbreviation | PA6-GF40 |
| ISO 16396 designation | PA6,GF40,MS,S14-140 |

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

Physical properties

| Condition | Standard | Unit | Value |
|-----------------------------|-----------------|-------------------|--------|
| Density | ISO 1183 | g/cm ³ | 1.62 |
| Molding shrinkage, parallel | ISO 294-4, 2577 | % | >=0.22 |
| Molding shrinkage, normal | ISO 294-4, 2577 | % | >=0.74 |

| | Condition | Standard | Unit | Value |
|---------------------------------------|-----------|--------------|-------------------|---------------------|
| Mechanical properties | | | | dam / cond.* |
| Tensile modulus | 1 mm/min | ISO 527-1/-2 | MPa | 14000 / 8900 |
| Stress at break | | ISO 527-1/-2 | MPa | 180 / 120 |
| Strain at break | | ISO 527-1/-2 | % | 3 / 5.7 |
| Flexural modulus, ISO 178 | 2 mm/min | ISO 178 | MPa | 12000 / - |
| Flexural strength, ISO 178 | 2 mm/min | ISO 178 | MPa | 280 / - |
| Charpy impact strength, +23°C | +23°C | ISO 179/1eU | kJ/m ² | 63 / 70 |
| Charpy notched impact strength, +23°C | +23°C | ISO 179/1eA | kJ/m ² | 14 / 20 |

*: **conditioned according to ISO 1110**

| | 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 | 220 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75 | °C | 220 |

| | Condition | Standard | Unit | Value |
|-------------------------------------|-----------|-----------|------|-------------|
| Burning behaviour | | | | |
| Burning rate, FMVSS, Thickness 1 mm | | FMVSS 302 | | <100 mm/min |

Processing conditions

| | |
|-------------------------|---|
| Drying temperature/time | 75-85°C / 2-4h (with dew point of dried air < -30 °C) |
| Suggested max moisture | 0.2 % |

Injection notes

The material is supplied in airtight bags, ready for use.,In case that the virgin material has absorbed moisture, it must be dried with a dehumidified air drying equipment, dew point minimum -20°C.,Recommended time 2-4h.

Injection advice

For reinforced polyamides, Domo recommends the use of steel with a high content of carbon, and purified for polishing, to avoid or limit the abrasion. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (DIN Norm) or X160CrMoV12 (EN Norm) - DOMO Engineering Plastics

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Injection advice

1.2601 /1.2379 (DIN Norm). In the case of high requirements on surface quality a mould temperature of up to 120°C can be considered.,The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design.