

TECHNICAL DATA SHEET

## DOMONYL 1850R33T1U2 GY 426

Polyamide 6, 33% glass fiber reinforced, improved impact resistance, for injection moulding. For America availability only.

### General

|                       |                    |                      |  |
|-----------------------|--------------------|----------------------|--|
| Polymer type          | PA6                |                      |  |
| Certifications        | RoHS               | EC 1907/2006 (REACH) |  |
| Feature               | impact modified    |                      |  |
| Colors available      | grey               |                      |  |
| Forms                 | pellets            |                      |  |
| Processing technology | injection moulding |                      |  |

### Product identification

|                       |                      |
|-----------------------|----------------------|
| ISO 1043 abbreviation | PA6-I-GF33           |
| ISO 16396 designation | PA6,GF33,MPH,S14-080 |

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

### Physical properties

| Condition                   | Standard        | Unit              | Value     |
|-----------------------------|-----------------|-------------------|-----------|
| Density                     | ISO 1183        | g/cm <sup>3</sup> | 1.36      |
| Molding shrinkage, parallel | ISO 294-4, 2577 | %                 | 0.1 - 0.2 |
| Molding shrinkage, normal   | ISO 294-4, 2577 | %                 | 0.7 - 0.8 |

|                                       | Condition | Standard     | Unit              | Value               |
|---------------------------------------|-----------|--------------|-------------------|---------------------|
| <b>Mechanical properties</b>          |           |              |                   | <b>dam / cond.*</b> |
| Tensile modulus                       | 1 mm/min  | ISO 527-1/-2 | MPa               | 9700 / 5300         |
| Stress at break                       |           | ISO 527-1/-2 | MPa               | 130 / 75            |
| Strain at break                       |           | ISO 527-1/-2 | %                 | 2.3 / 7.7           |
| Flexural modulus, ISO 178             | 2 mm/min  | ISO 178      | MPa               | 8500 / -            |
| Flexural strength, ISO 178            | 2 mm/min  | ISO 178      | MPa               | 200 / -             |
| Charpy impact strength, +23°C         | +23°C     | ISO 179/1eU  | kJ/m <sup>2</sup> | 55 / 65             |
| Charpy impact strength, -30°C         | -30°C     | ISO 179/1eU  | kJ/m <sup>2</sup> | 55 / 50             |
| Charpy notched impact strength, +23°C | +23°C     | ISO 179/1eA  | kJ/m <sup>2</sup> | 11 / 22             |
| Charpy notched impact strength, -30°C | -30°C     | ISO 179/1eA  | kJ/m <sup>2</sup> | 6 / 7               |

\*: **conditioned according to ISO 1110**

|  | Condition | Standard    | Unit | Value |
|--|-----------|-------------|------|-------|
| <b>Thermal properties</b>                |           |             |      |       |
| 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   | 210   |

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

|                              |   |
|------------------------------|---|
| <b>Processing conditions</b> |   |
| 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) - 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.