

TECHNICAL DATA SHEET

**TECHNYL RED J 218HP V35 BK 21N**

TECHNYL RED J 218HP V35 BK21N is a copolyamide 66/6T, reinforced with 35% glass fibre. Technyl® RED J offers outstanding long-term ageing performance up to 220°C (2000 hours) or 210°C (3000 hours). Technyl RED J has similar flow as standard PA66 and ensures a high chemical resistance and an excellent surface aspect. In addition, Technyl Red J is highly suitable for both vibration and hot gas welding, delivering high burst pressure levels. Recommended melt and mold temperatures are significantly lower than competitive PA4.6 or PPA resins, which saves energy during processing and minimizes part cooling time. The data provided are based on laboratory / experimental results and could be adjusted after industrial production.

**General**

|                       |  |                          |
|-----------------------|--|--------------------------|
| Feature               | Excellent processability<br>heat resistant | Excellent surface finish |
| Polymer type          | PA66/6T copolymer                          |                          |
| Processing technology | Injection molding                          |                          |
| Certification         | RoHS                                       | EC 1907/2006 (REACH)     |
| Applications          | Automotive Applications                    |                          |
| Colors available      | Black                                      |                          |
| Forms                 | Pellets                                    |                          |

**Product identification**

|                       |                          |
|-----------------------|--------------------------|
| ISO 1043 abbreviation | PA66/6T+6 - GF35         |
| ISO 16396 designation | PA66/6T,GF350,M1,S14-110 |

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

**Physical properties**

|                             |  |                 |                   |      |
|-----------------------------|--|-----------------|-------------------|------|
| Density                     |  | ISO 1183        | g/cm <sup>3</sup> | 1.42 |
| Molding shrinkage, parallel |  | ISO 294-4, 2577 | %                 | 0.2  |
| Molding shrinkage, normal   |  | ISO 294-4, 2577 | %                 | 0.7  |

**Mechanical properties**

dam / cond.\*

|                                       |          |              |                   |              |
|---------------------------------------|----------|--------------|-------------------|--------------|
| Tensile modulus                       | 1 mm/min | ISO 527-1/-2 | MPa               | 11100 / 7400 |
| Stress at break                       |          | ISO 527-1/-2 | MPa               | 203 / 128    |
| Strain at break                       |          | ISO 527-1/-2 | %                 | 3.2 / 6      |
| Charpy impact strength, +23°C         | +23°C    | ISO 179/1eU  | kJ/m <sup>2</sup> | 80 / 90      |
| Charpy impact strength, -30°C         | -30°C    | ISO 179/1eU  | kJ/m <sup>2</sup> | 68 / 80      |
| Charpy notched impact strength, +23°C | +23°C    | ISO 179/1eA  | kJ/m <sup>2</sup> | 12 / 14      |
| Charpy notched impact strength, -30°C | -30°C    | ISO 179/1eA  | kJ/m <sup>2</sup> | 10 / 11      |

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**Thermal properties**

|  |          |             |    |     |
|--|----------|-------------|----|-----|
| Melting temperature, 10°C/min            |          | ISO 11357-1 | °C | 270 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75      | °C | 239 |

**Burning behaviour**

|                                     |  |           |  |      |
|-------------------------------------|--|-----------|--|------|
| Burning rate, FMVSS, Thickness 1 mm |  | FMVSS 302 |  | <100 |
|-------------------------------------|--|-----------|--|------|

\*: conditioned according to ISO 1110

**Processing conditions**

|                               |              |
|-------------------------------|--------------|
| Drying temperature/time       | 80 °C        |
| Suggested max moisture        | 0.12 %       |
| Rear temperature              | 290 - 300 °C |
| Middle temperature            | 295 - 305 °C |
| Front temperature             | 300 - 310 °C |
| Recommended mould temperature | 85 - 100 °C  |

**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.

**Disclaimer**

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