

## TECHNYL® ONE J 60X1 V15 BK

DOMO Engineering Plastics - Polyamide 66/6T Copolymer

### General Information

#### Product Description

TECHNYL ONE J 60X1 V15 BK is a high temperature polyamide based on a non-halogenated flame retardant system, reinforced with 15% of glass fiber with best-in-class fire protection behavior, for injection moulding. This product has superior electrical performance compared to traditional high-performance plastics. Its low corrosion ensures processing tools longevity. This product, based on a high fluidity matrix, offers strong benefits in term of productivity and design freedom. The data provided are based on laboratory/experimental results. These data could be adjusted after industrial production.

#### General

|                             |                                            |                                          |                                                   |
|-----------------------------|--------------------------------------------|------------------------------------------|---------------------------------------------------|
| Material Status             | • Commercial: Active                       |                                          |                                                   |
| Availability                | • Africa & Middle East<br>• Asia Pacific   | • Europe<br>• Latin America              | • North America                                   |
| Filler / Reinforcement      | • Glass Fiber, 15% Filler by Weight        |                                          |                                                   |
| Additive                    | • Flame Retardant                          |                                          |                                                   |
| Features                    | • Corrosion Resistant<br>• Flame Retardant | • Good Heat Resistance<br>• Halogen Free | • High Flow<br>• Low (to None) Phosphorus Content |
| Uses                        | • Connectors                               | • Electrical/Electronic Applications     |                                                   |
| Agency Ratings              | • EC 1907/2006 (REACH)                     | • EN 45545                               | • UL 94                                           |
| RoHS Compliance             | • RoHS Compliant                           |                                          |                                                   |
| Processing Method           | • Injection Molding                        |                                          |                                                   |
| ISO Designation (ISO 16396) | • PA66/6T,GF15FR40,MH,S14-080              |                                          |                                                   |
| Resin ID (ISO 1043)         | • PA66/6T-GF15 FR(40)                      |                                          |                                                   |

### Properties <sup>1</sup>

| Physical                                                | Nominal Value | Unit                  | Test Method |
|---------------------------------------------------------|---------------|-----------------------|-------------|
| Density                                                 | 1.30          | g/cm <sup>3</sup>     | ISO 1183    |
| Molding Shrinkage                                       |               |                       | ISO 294-4   |
| Across Flow                                             | 0.90 to 1.1   | %                     |             |
| Flow                                                    | 0.70 to 0.90  | %                     |             |
| Water Absorption (24 hr, 73°F)                          | 0.75          | %                     | ISO 62      |
| Mechanical                                              | Nominal Value | Unit                  | Test Method |
| Tensile Modulus                                         | 1.10E+6       | psi                   | ISO 527-1   |
| Tensile Stress (Break)                                  | 18100         | psi                   | ISO 527-2   |
| Tensile Strain (Break)                                  | 2.8           | %                     | ISO 527-2   |
| Flexural Modulus                                        | 914000        | psi                   | ISO 178     |
| Flexural Stress                                         | 17400         | psi                   | ISO 178     |
| Impact                                                  | Nominal Value | Unit                  | Test Method |
| Charpy Notched Impact Strength (73°F)                   | 2.9           | ft·lb/in <sup>2</sup> | ISO 179/1eA |
| Charpy Unnotched Impact Strength (73°F)                 | 19            | ft·lb/in <sup>2</sup> | ISO 179/1eU |
| Notched Izod Impact Strength (-22°F)                    | 3.8           | ft·lb/in <sup>2</sup> | ISO 180/1A  |
| Thermal                                                 | Nominal Value | Unit                  | Test Method |
| Deflection Temperature Under Load (264 psi, Unannealed) | 473           | °F                    | ISO 75-2/A  |
| Melting Temperature <sup>2</sup>                        | 532           | °F                    | ISO 11357-3 |
| Electrical                                              | Nominal Value | Unit                  | Test Method |
| Electric Strength                                       | 890           | V/mil                 | IEC 60243-1 |
| Comparative Tracking Index (CTI)                        | PLC 0         |                       | IEC 60112   |
| Comparative Tracking Index                              | 600           | V                     | IEC 60112   |
| Flammability                                            | Nominal Value | Unit                  | Test Method |



|                                |              |                |
|--------------------------------|--------------|----------------|
| Burning Rate (0.0394 in)       | < 3.9 in/min | FMVSS 302      |
| Flame Rating                   |              | UL 94          |
| 0.030 in                       | V-0          |                |
| 0.06 in                        | V-0          |                |
| 0.12 in                        | V-0          |                |
| Glow Wire Flammability Index   |              | IEC 60695-2-12 |
| 0.030 in                       | 1760 °F      |                |
| 0.06 in                        | 1760 °F      |                |
| 0.12 in                        | 1760 °F      |                |
| Glow Wire Ignition Temperature |              | IEC 60695-2-13 |
| 0.030 in                       | 1380 °F      |                |
| 0.06 in                        | 1340 °F      |                |
| 0.12 in                        | 1430 °F      |                |

### Processing Information

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 176           | °F   |
| Suggested Max Moisture | 0.12          | %    |
| Rear Temperature       | 545 to 563    | °F   |
| Middle Temperature     | 554 to 572    | °F   |
| Front Temperature      | 554 to 572    | °F   |
| Mold Temperature       | 194 to 230    | °F   |

### 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, recommended water content maximum 0,15% (optimum 0,08%-0,12%)

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 10°C/min

