

## TECHNYL® PROTECT A 50X1 GY 2607

DOMO Engineering Plastics - Polyamide 66 + PA 6

### General Information

#### Product Description

\*Previously TECHNYL A 50X1 GREY 2607

TECHNYL PROTECT A 50X1 GY 2607 is an unreinforced blend of polyamide 66 and 6 based on a non-phosphorous and non-halogenated flame retardant system, heat stabilized, for injection moulding. This flame retardant grade, UL94 V0 at 0.4mm, offers excellent filling qualities together with good stiffness.

#### General

|                             |                          |                                      |                 |
|-----------------------------|--------------------------|--------------------------------------|-----------------|
| Material Status             | • Commercial: Active     |                                      |                 |
| Availability                | • Africa & Middle East   | • Europe                             | • North America |
|                             | • Asia Pacific           | • Latin America                      |                 |
| Additive                    | • Flame Retardant        |                                      |                 |
| Features                    | • Flame Retardant        | • Halogen Free                       |                 |
| 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,FR(30),M1,S14-040 |                                      |                 |
| Resin ID (ISO 1043)         | • PA66+PA6 FR(30)        |                                      |                 |

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

| Physical                                                | Dry          | Conditioned | Unit                  | Test Method   |
|---------------------------------------------------------|--------------|-------------|-----------------------|---------------|
| Density                                                 | 1.16         | --          | g/cm <sup>3</sup>     | ISO 1183      |
| Molding Shrinkage                                       |              |             |                       | ISO 294-4     |
| Across Flow                                             | 0.70 to 0.80 | --          | %                     |               |
| Flow                                                    | 0.95 to 1.1  | --          | %                     |               |
| Water Absorption (24 hr, 73°F)                          | 1.0          | --          | %                     | ISO 62        |
| Water Absorption (Equilibrium, 73°F, 50% RH)            | 2.7          | --          | %                     | ISO 62        |
| Mechanical                                              | Dry          | Conditioned | Unit                  | Test Method   |
| Tensile Modulus                                         | 537000       | 189000      | psi                   | ISO 527-1     |
| Tensile Stress (Yield)                                  | 10900        | 7250        | psi                   | ISO 527-2     |
| Tensile Stress (Break)                                  | 10200        | 7250        | psi                   | ISO 527-2     |
| Tensile Strain (Yield)                                  | 4.0          | --          | %                     | ISO 527-2     |
| Tensile Strain (Break)                                  | 15           | 150         | %                     | ISO 527-2     |
| Flexural Modulus                                        | 464000       | 160000      | psi                   | ISO 178       |
| Flexural Stress                                         | 15200        | 7250        | psi                   | ISO 178       |
| Impact                                                  | Dry          | Conditioned | Unit                  | Test Method   |
| Charpy Notched Impact Strength                          |              |             |                       | ISO 179/1eA   |
| -22°F                                                   | 1.7          | --          | ft·lb/in <sup>2</sup> |               |
| 73°F                                                    | 1.9          | 6.7         | ft·lb/in <sup>2</sup> |               |
| Charpy Unnotched Impact Strength (73°F)                 | 38           | --          | ft·lb/in <sup>2</sup> | ISO 179/1eU   |
| Thermal                                                 | Dry          | Conditioned | Unit                  | Test Method   |
| Deflection Temperature Under Load (66 psi, Unannealed)  | 392          | --          | °F                    | ISO 75-2/B    |
| Deflection Temperature Under Load (264 psi, Unannealed) | 140          | --          | °F                    | ISO 75-2/A    |
| Melting Temperature <sup>2</sup>                        | 495          | --          | °F                    | ISO 11357-3   |
| Electrical                                              | Dry          | Conditioned | Unit                  | Test Method   |
| Surface Resistivity                                     | 1.0E+15      | --          | ohms                  | IEC 62631-3-2 |
| Volume Resistivity                                      | 1.0E+13      | --          | ohms·m                | IEC 62631-3-1 |



|                                  |            |                    |             |                    |
|----------------------------------|------------|--------------------|-------------|--------------------|
| Electric Strength                | 860        | --                 | V/mil       | IEC 60243-1        |
| Comparative Tracking Index (CTI) | PLC 0      | --                 |             | IEC 60112          |
| Comparative Tracking Index       | 600        | --                 | V           | IEC 60112          |
| <b>Flammability</b>              | <b>Dry</b> | <b>Conditioned</b> | <b>Unit</b> | <b>Test Method</b> |
| Burning Rate (0.0394 in)         | < 3.9      | --                 | in/min      | FMVSS 302          |
| Flame Rating                     |            |                    |             | UL 94              |
| 0.016 in                         | V-0        | --                 |             |                    |
| 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     |
| 0.016 in                         | 1760       | --                 | °F          |                    |
| 0.030 in                         | 1710       | --                 | °F          |                    |
| 0.06 in                          | 1430       | --                 | °F          |                    |
| 0.12 in                          | 1380       | --                 | °F          |                    |
| Oxygen Index                     | 33         | --                 | %           |                    |

### Processing Information

|                        |                 |
|------------------------|-----------------|
| <b>Injection</b>       | <b>Dry Unit</b> |
| Drying Temperature     | 167 to 185 °F   |
| Drying Time            | 2.0 to 4.0 hr   |
| Dew Point              | < -22 °F        |
| Suggested Max Moisture | 0.12 %          |
| Rear Temperature       | 500 to 518 °F   |
| Middle Temperature     | 509 to 527 °F   |
| Front Temperature      | 509 to 527 °F   |
| Mold Temperature       | 140 to 176 °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.

### Notes

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

<sup>2</sup> 10°C/min

