

# TECHNYL® B 50H1 NATURAL L

Polyamide 66/6 Copolymer  
Solvay Engineering Plastics

Message:

TECHNYL® B 50H1 Natural L is an unreinforced melamine cyanurate flame retarded copolyamide 66/6. This product has been heat stabilised and is suitable for injection moulding. This product is available in natural and other colors upon request.

| General Information            |       |                                    |                  |                 |
|--------------------------------|-------|------------------------------------|------------------|-----------------|
| UL YellowCard                  |       | E44716-235619                      | E44716-101672505 |                 |
| Additive                       |       | Flame Retardant                    |                  |                 |
|                                |       | Heat Stabilizer                    |                  |                 |
| Features                       |       | Ductile                            |                  |                 |
|                                |       | Flame Retardant                    |                  |                 |
|                                |       | Good Moldability                   |                  |                 |
|                                |       | Good Stiffness                     |                  |                 |
|                                |       | Halogen Free                       |                  |                 |
|                                |       | Heat Stabilized                    |                  |                 |
|                                |       | Low (to None) Phosphorus Content   |                  |                 |
| Uses                           |       | Connectors                         |                  |                 |
|                                |       | Electrical/Electronic Applications |                  |                 |
| Agency Ratings                 |       | UU 453/2010/EC                     |                  |                 |
| RoHS Compliance                |       | RoHS Compliant                     |                  |                 |
| Appearance                     |       | Natural Color                      |                  |                 |
| Processing Method              |       | Injection Molding                  |                  |                 |
| Part Marking Code (ISO 11469)  |       | >PA66/6 FR(30)<                    |                  |                 |
| Physical                       | Dry   | Conditioned                        | Unit             | Test Method     |
| Density                        | 1.16  | --                                 | g/cm³            | ISO 1183/A      |
| Molding Shrinkage              |       |                                    |                  | Internal Method |
| Across Flow                    | 1.0   | --                                 | %                |                 |
| Flow                           | 1.1   | --                                 | %                |                 |
| Water Absorption (23°C, 24 hr) | 1.1   | --                                 | %                | ISO 62          |
| Molding Shrinkage Isotropy     | 1.10  | --                                 |                  | Internal Method |
| Fire and Smoke F Index         | I2/F3 | --                                 |                  | NF F16-101      |
| Mechanical                     | Dry   | Conditioned                        | Unit             | Test Method     |
| Tensile Modulus                | 3600  | 2200                               | MPa              | ISO 527-2/1A    |
| Tensile Strength               |       |                                    |                  |                 |

|                                                         |                      |             |                   |                        |
|---------------------------------------------------------|----------------------|-------------|-------------------|------------------------|
| Yield                                                   | 85.0                 | --          | MPa               | ASTM D638              |
| Yield                                                   | 80.0                 | 40.0        | MPa               | ISO 527-2/1A           |
| Break                                                   | 70.0                 | 40.0        | MPa               | ISO 527-2/1A           |
| Tensile Strain                                          |                      |             |                   |                        |
| Yield                                                   | 4.0                  | 5.0         | %                 | ISO 527-2/1A           |
| Break                                                   | 10                   | --          | %                 | ASTM D638              |
| Break                                                   | 10                   | 100         | %                 | ISO 527-2/1A           |
| Flexural Modulus                                        | 3650                 | --          | MPa               | ASTM D790              |
| Flexural Strength                                       | 120                  | --          | MPa               | ASTM D790              |
| Impact                                                  | Dry                  | Conditioned | Unit              | Test Method            |
| Charpy Notched Impact Strength (23°C)                   | 4.5                  | 5.5         | kJ/m <sup>2</sup> | ISO 179/1eA            |
| Charpy Unnotched Impact Strength (23°C)                 | 90 kJ/m <sup>2</sup> | No Break    |                   | ISO 179/1eU            |
| Notched Izod Impact                                     |                      |             |                   |                        |
| 23°C                                                    | 60                   | --          | J/m               | ASTM D256              |
| 23°C                                                    | 5.0                  | 6.5         | kJ/m <sup>2</sup> | ISO 180/1A             |
| Thermal                                                 | Dry                  | Conditioned | Unit              | Test Method            |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 85.0                 | --          | °C                | ASTM D648, ISO 75-2/Af |
| Melting Temperature                                     | 242                  | --          | °C                | ISO 11357-3            |
| CLTE - Flow (23 to 85°C)                                | 6.5E-5               | --          | cm/cm/°C          | ISO 11359-2            |
| Electrical                                              | Dry                  | Conditioned | Unit              | Test Method            |
| Surface Resistivity                                     | 1.0E+15              | 1.0E+12     | ohms              | IEC 60093              |
| Volume Resistivity                                      | 1.0E+15              | 1.0E+15     | ohms·cm           | IEC 60093              |
| Electric Strength                                       | 34                   | 30          | kV/mm             | IEC 60243-1            |
| Relative Permittivity                                   | 3.60                 | 4.00        |                   | IEC 60250              |
| Dissipation Factor                                      | 0.020                | 0.060       |                   | IEC 60250              |
| Comparative Tracking Index                              |                      |             |                   | IEC 60112              |
| Solution A                                              | 600                  | 600         | V                 |                        |
| Solution B                                              | 575                  | 600         | V                 |                        |
| Flammability                                            | Dry                  | Conditioned | Unit              | Test Method            |
| Flame Rating                                            |                      |             |                   | UL 94                  |
| 0.380 mm                                                | V-0                  | --          |                   |                        |
| 0.800 mm                                                | V-0                  | --          |                   |                        |
| 1.60 mm                                                 | V-0                  | --          |                   |                        |
| 3.20 mm                                                 | V-0                  | --          |                   |                        |
| Glow Wire Flammability Index                            |                      |             |                   | IEC 60695-2-12         |
| 0.800 mm                                                | 960                  | --          | °C                |                        |
| 1.60 mm                                                 | 960                  | --          | °C                |                        |
| 3.20 mm                                                 | 960                  | --          | °C                |                        |

|                                          |              |      |    |                |
|------------------------------------------|--------------|------|----|----------------|
| Glow Wire Ignition Temperature (1.60 mm) | 650          | --   | °C | IEC 60695-2-13 |
| Oxygen Index                             | 33           | --   | %  | ISO 4589-2     |
| Injection                                | Dry          | Unit |    |                |
| Drying Temperature                       | 80.0         |      | °C |                |
| Suggested Max Moisture                   | 0.20         |      | %  |                |
| Rear Temperature                         | 240 to 250   |      | °C |                |
| Middle Temperature                       | 245 to 255   |      | °C |                |
| Front Temperature                        | 250 to 260   |      | °C |                |
| Mold Temperature                         | 60.0 to 80.0 |      | °C |                |

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

#### Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

