

# TECHNYL® A 218 V30 NATURAL

Polyamide 66  
Solvay Engineering Plastics

Message:

TECHNYL® A 218 V30 Natural is a polyamide 66, reinforced with 30% of glass fibre, heat stabilized, for injection moulding. This product is available in natural color.

| General Information            |       |                                            |               |                 |
|--------------------------------|-------|--------------------------------------------|---------------|-----------------|
| UL YellowCard                  |       | E44716-235569                              | E44716-235570 |                 |
| Filler / Reinforcement         |       | Glass Fiber,30% Filler by Weight           |               |                 |
| Additive                       |       | Heat Stabilizer                            |               |                 |
| Features                       |       | Heat Stabilized                            |               |                 |
| Agency Ratings                 |       | UU 453/2010/EC                             |               |                 |
| RoHS Compliance                |       | RoHS Compliant                             |               |                 |
| Appearance                     |       | Natural Color                              |               |                 |
| Processing Method              |       | Injection Molding                          |               |                 |
| Multi-Point Data               |       | Isothermal Stress vs. Strain (ISO 11403-1) |               |                 |
|                                |       | Viscosity vs. Shear Rate (ISO 11403-2)     |               |                 |
| Part Marking Code (ISO 11469)  |       | >PA66-GF30<                                |               |                 |
| Physical                       | Dry   | Conditioned                                | Unit          | Test Method     |
| Density                        | 1.37  | --                                         | g/cm³         | ISO 1183/A      |
| Molding Shrinkage              |       |                                            |               | Internal Method |
| Across Flow                    | 0.80  | --                                         | %             |                 |
| Flow                           | 0.50  | --                                         | %             |                 |
| Water Absorption (23°C, 24 hr) | 0.80  | --                                         | %             | ISO 62          |
| Molding Shrinkage Isotropy     | 0.620 | --                                         |               | Internal Method |
| Fire and Smoke F Index         | I2/F3 | --                                         |               | NF F16-101      |
| Mechanical                     | Dry   | Conditioned                                | Unit          | Test Method     |
| Tensile Modulus                | 10000 | 7500                                       | MPa           | ISO 527-2/1A    |
| Tensile Stress (Break)         | 190   | 135                                        | MPa           | ISO 527-2/1A    |
| Tensile Elongation             |       |                                            |               |                 |
| Break                          | 3.3   | --                                         | %             | ASTM D638       |
| Break                          | 3.0   | 4.0                                        | %             | ISO 527-2/1A    |
| Flexural Modulus               |       |                                            |               |                 |
| --                             | 9000  | --                                         | MPa           | ASTM D790       |
| --                             | 9000  | 6400                                       | MPa           | ISO 178         |
| Flexural Strength              |       |                                            |               |                 |
| --                             | 290   | --                                         | MPa           | ASTM D790       |

|                                                         |             |             |                   |                        |
|---------------------------------------------------------|-------------|-------------|-------------------|------------------------|
| --                                                      | 280         | 185         | MPa               | ISO 178                |
| Impact                                                  | Dry         | Conditioned | Unit              | Test Method            |
| Charpy Notched Impact Strength (23°C)                   | 11          | 15          | kJ/m <sup>2</sup> | ISO 179/1eA            |
| Charpy Unnotched Impact Strength (23°C)                 | 80          | 88          | kJ/m <sup>2</sup> | ISO 179/1eU            |
| Notched Izod Impact                                     |             |             |                   |                        |
| 23°C                                                    | 120         | --          | J/m               | ASTM D256              |
| 23°C                                                    | 10          | 18          | kJ/m <sup>2</sup> | ISO 180/1A             |
| Unnotched Izod Impact Strength                          | 60          | 65          | kJ/m <sup>2</sup> | ISO 180                |
| Thermal                                                 | Dry         | Conditioned | Unit              | Test Method            |
| Deflection Temperature Under Load (1.8 MPa, Unannealed) | 255         | --          | °C                | ASTM D648, ISO 75-2/Af |
| Melting Temperature                                     |             |             |                   |                        |
| --                                                      | 263         | --          | °C                | ISO 11357-3            |
| --                                                      | 260         | --          | °C                | ASTM D3418             |
| CLTE                                                    |             |             |                   | ISO 11359-2            |
| Flow : 23 to 85°C                                       | 2.5E-5      | --          | cm/cm/°C          |                        |
| Transverse : 23 to 85°C                                 | 2.5E-5      | --          | cm/cm/°C          |                        |
| Electrical                                              | Dry         | Conditioned | Unit              | Test Method            |
| Surface Resistivity                                     | 6.0E+14     | 1.0E+12     | ohms              | IEC 60093              |
| Volume Resistivity                                      | 1.0E+15     | 1.0E+13     | ohms·cm           | IEC 60093              |
| Electric Strength                                       | 34          | 29          | kV/mm             | IEC 60243-1            |
| Relative Permittivity                                   | 3.70        | 4.00        |                   | IEC 60250              |
| Dissipation Factor                                      | 0.010       | 0.11        |                   | IEC 60250              |
| Comparative Tracking Index                              |             |             |                   | IEC 60112              |
| Solution A                                              | 600         | 600         | V                 |                        |
| Solution B                                              | 500         | --          | V                 |                        |
| Flammability                                            | Dry         | Conditioned | Unit              | Test Method            |
| Flame Rating (1.60 mm)                                  | HB          | --          |                   | UL 94                  |
| Glow Wire Flammability Index (1.60 mm)                  | 700         | --          | °C                | IEC 60695-2-12         |
| Oxygen Index                                            | 23          | --          | %                 | ISO 4589-2             |
| Injection                                               | Dry         | Unit        |                   |                        |
| Drying Temperature                                      | 80.0        |             | °C                |                        |
| Suggested Max Moisture                                  | 0.20        |             | %                 |                        |
| Rear Temperature                                        | 265 to 275  |             | °C                |                        |
| Middle Temperature                                      | 270 to 280  |             | °C                |                        |
| Front Temperature                                       | 280 to 290  |             | °C                |                        |
| Mold Temperature                                        | 70.0 to 100 |             | °C                |                        |

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