

# TAROLOX 2050 W G9

Polybutylene Terephthalate + PET

Taro Plast S.p.A.

Message:

PBT/PET alloy 45% glass fibres reinforced, very good surface appearance, high temperature and chemical resistance. High dimensional stability with low moisture absorption.

| General Information                        |                                                       |                   |                 |
|--------------------------------------------|-------------------------------------------------------|-------------------|-----------------|
| Filler / Reinforcement                     | Glass fiber reinforced material, 45% filler by weight |                   |                 |
| Features                                   | Good dimensional stability                            |                   |                 |
|                                            | Low hygroscopicity                                    |                   |                 |
|                                            | Good chemical resistance                              |                   |                 |
|                                            | Heat resistance, high                                 |                   |                 |
|                                            | Good appearance                                       |                   |                 |
| Processing Method                          | Injection molding                                     |                   |                 |
| Physical                                   | Nominal Value                                         | Unit              | Test Method     |
| Density                                    | 1.64 - 1.66                                           | g/cm <sup>3</sup> | ISO 1183        |
| Molding Shrinkage                          |                                                       |                   | Internal method |
| Vertical flow direction                    | 0.30 - 0.40                                           | %                 | Internal method |
| Flow direction                             | 0.15 - 0.25                                           | %                 | Internal method |
| Water Absorption (23°C, 24 hr)             | 0.050                                                 | %                 | ISO 62          |
| Granule Humidity <sup>1</sup>              |                                                       | %                 |                 |
| Reinforcement Content <sup>2</sup> (750°C) | 45                                                    | %                 | ISO 3451        |
| Mechanical                                 | Nominal Value                                         | Unit              | Test Method     |
| Tensile Modulus                            | 14000                                                 | MPa               | ISO 527-2/1     |
| Tensile Stress (Break)                     | 140                                                   | MPa               | ISO 527-2/50    |
| Tensile Strain (Break)                     | 1.8                                                   | %                 | ISO 527-2/50    |
| Flexural Modulus <sup>3</sup>              | 12000                                                 | MPa               | ISO 178         |
| Flexural Stress <sup>4</sup>               | 220                                                   | MPa               | ISO 178         |
| Impact                                     | Nominal Value                                         | Unit              | Test Method     |
| Charpy Notched Impact Strength (23°C)      | 10                                                    | kJ/m <sup>2</sup> | ISO 179/1eA     |
| Charpy Unnotched Impact Strength (23°C)    | 70                                                    | kJ/m <sup>2</sup> | ISO 179/1eU     |
| Notched Izod Impact                        |                                                       |                   | ASTM D256       |
| -20°C                                      | 80                                                    | J/m               | ASTM D256       |
| 23°C                                       | 90                                                    | J/m               | ASTM D256       |
| Thermal                                    | Nominal Value                                         | Unit              | Test Method     |
| Heat Deflection Temperature <sup>5</sup>   |                                                       |                   |                 |
| 0.45 MPa, not annealed                     | 240                                                   | °C                | ISO 75-2/B      |
| 1.8 MPa, not annealed                      | 210                                                   | °C                | ISO 75-2/A      |

| Continuous Use Temperature <sup>6</sup>                    | 130           | °C       | IEC 60216      |
|------------------------------------------------------------|---------------|----------|----------------|
| Vicat Softening Temperature                                | 224           | °C       | ISO 306/B50    |
| Ball Pressure Test (215°C)                                 | Pass          |          | IEC 60695-10-2 |
| Melting Temperature                                        | 235           | °C       | ISO 11357-3    |
| CLTE - Flow (-30 to 30°C)                                  | 1.4E-5        | cm/cm/°C | ISO 11359-2    |
| Electrical                                                 | Nominal Value | Unit     | Test Method    |
| Volume Resistivity                                         | > 1.0E+14     | ohms·cm  | IEC 60093      |
| Dielectric Strength (3.20 mm)                              | 22            | kV/mm    | IEC 60243-1    |
| Dielectric Constant                                        | 3.60          |          | IEC 60250      |
| Comparative Tracking Index (Solution A)                    | 250           | V        | IEC 60112      |
| Flammability                                               | Nominal Value | Unit     | Test Method    |
| Flame Rating                                               |               |          | UL 94          |
| 0.970 mm                                                   | HB            |          | UL 94          |
| 1.60 mm                                                    | HB            |          | UL 94          |
| Glow Wire Flammability Index (2.00 mm)                     | 650           | °C       | IEC 60695-2-12 |
| Oxygen Index                                               | 19            | %        | ASTM D2863     |
| Injection                                                  | Nominal Value | Unit     |                |
| Drying Temperature                                         | 110 - 130     | °C       |                |
| Drying Time                                                | 2.0           | hr       |                |
| Processing (Melt) Temp                                     | 270 - 290     | °C       |                |
| Mold Temperature                                           | 90.0 - 130    | °C       |                |
| Injection Rate                                             | Moderate-Fast |          |                |
| Injection instructions                                     |               |          |                |
| Pre-heat Temperature: 130 to 150°CPre-heat Time: 2 to 3 hr |               |          |                |
| NOTE                                                       |               |          |                |
| 1.                                                         | TARO 002      |          |                |
| 2.                                                         | 1 hr          |          |                |
| 3.                                                         | 1.0 mm/min    |          |                |
| 4.                                                         | 1.0 mm/min    |          |                |
| 5.                                                         | 120°C/hr      |          |                |
| 6.                                                         | 20,000 hr     |          |                |

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