

# Grilon® TSC-10/4 EC black 9832

Polyamide 66/6 Copolymer

EMS-GRIVORY

## Message:

Grilon® TSC-10/4 EC black 9832 is a Polyamide 66/6 Copolymer (Nylon 66/6) material filled with 10% carbon fiber. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America for injection molding.

Important attributes of Grilon® TSC-10/4 EC black 9832 are:

Flame Rated

RoHS Compliant

Antistatic

Conductive

Wear Resistant

Typical applications include:

Appliances

Automotive

Consumer Goods

Electrical/Electronic Applications

Engineering/Industrial Parts

| General Information    |      |                                    |                   |             |
|------------------------|------|------------------------------------|-------------------|-------------|
| UL YellowCard          |      | E53898-592183                      |                   |             |
| Filler / Reinforcement |      | Carbon Fiber, 10% Filler by Weight |                   |             |
| Additive               |      | Antistatic                         |                   |             |
| Features               |      | Antistatic                         |                   |             |
|                        |      | Electrically Conductive            |                   |             |
|                        |      | Good Wear Resistance               |                   |             |
|                        |      | Low Friction                       |                   |             |
| Uses                   |      | Appliance Components               |                   |             |
|                        |      | Automotive Applications            |                   |             |
|                        |      | Consumer Applications              |                   |             |
|                        |      | Electrical/Electronic Applications |                   |             |
|                        |      | Engineering Parts                  |                   |             |
|                        |      | Industrial Applications            |                   |             |
|                        |      | Power/Other Tools                  |                   |             |
|                        |      | Sporting Goods                     |                   |             |
| RoHS Compliance        |      | RoHS Compliant                     |                   |             |
| Appearance             |      | Black                              |                   |             |
| Forms                  |      | Granules                           |                   |             |
| Processing Method      |      | Injection Molding                  |                   |             |
| Physical               | Dry  | Conditioned                        | Unit              | Test Method |
| Density                | 1.18 | --                                 | g/cm <sup>3</sup> | ISO 1183    |
| Molding Shrinkage      |      |                                    |                   | ISO 294-4   |

|                                        |             |                    |                   |                      |
|----------------------------------------|-------------|--------------------|-------------------|----------------------|
| Across Flow                            | 0.60        | --                 | %                 |                      |
| Flow                                   | 0.10        | --                 | %                 |                      |
| Water Absorption                       |             |                    |                   | ISO 62               |
| Saturation, 23°C                       | 5.0         | --                 | %                 |                      |
| Equilibrium, 23°C, 50% RH              | 1.5         | --                 | %                 |                      |
| <b>Mechanical</b>                      | <b>Dry</b>  | <b>Conditioned</b> | <b>Unit</b>       | <b>Test Method</b>   |
| Tensile Modulus                        | 9200        | 6500               | MPa               | ISO 527-2            |
| Tensile Stress (Break)                 | 170         | 120                | MPa               | ISO 527-2            |
| Tensile Strain (Break)                 | 3.0         | 7.0                | %                 | ISO 527-2            |
| <b>Impact</b>                          | <b>Dry</b>  | <b>Conditioned</b> | <b>Unit</b>       | <b>Test Method</b>   |
| Charpy Notched Impact Strength         |             |                    |                   | ISO 179/1eA          |
| -30°C                                  | 4.0         | 4.0                | kJ/m <sup>2</sup> |                      |
| 23°C                                   | 5.0         | 12                 | kJ/m <sup>2</sup> |                      |
| Charpy Unnotched Impact Strength       |             |                    |                   | ISO 179/1eU          |
| -30°C                                  | 40          | 40                 | kJ/m <sup>2</sup> |                      |
| 23°C                                   | 50          | 80                 | kJ/m <sup>2</sup> |                      |
| <b>Thermal</b>                         | <b>Dry</b>  | <b>Conditioned</b> | <b>Unit</b>       | <b>Test Method</b>   |
| Heat Deflection Temperature            |             |                    |                   |                      |
| 1.8 MPa, Unannealed                    | 240         | --                 | °C                | ISO 75-2/A           |
| 8.0 MPa, Unannealed                    | 110         | --                 | °C                | ISO 75-2/C           |
| Continuous Use Temperature             |             |                    |                   | Internal Method      |
| -- <sup>1</sup>                        | 90.0 to 120 | --                 | °C                |                      |
| -- <sup>2</sup>                        | 200         | --                 | °C                |                      |
| Melting Temperature <sup>3</sup>       | 260         | --                 | °C                | ISO 11357-3          |
| <b>Electrical</b>                      | <b>Dry</b>  | <b>Conditioned</b> | <b>Unit</b>       | <b>Test Method</b>   |
| Surface Resistivity                    | --          | 1.0E+7             | ohms              | IEC 60093            |
| Volume Resistivity                     | 1.0E+8      | 1.0E+8             | ohms·cm           | IEC 60093            |
| Electric Strength                      | 6.0         | 6.0                | kV/mm             | IEC 60243-1          |
| <b>Flammability</b>                    | <b>Dry</b>  | <b>Conditioned</b> | <b>Unit</b>       | <b>Test Method</b>   |
| Flammability Classification (0.800 mm) | HB          | --                 |                   | IEC 60695-11-10, -20 |
| <b>NOTE</b>                            |             |                    |                   |                      |
| 1.                                     | Long Term   |                    |                   |                      |
| 2.                                     | Short Term  |                    |                   |                      |
| 3.                                     | 10°C/min    |                    |                   |                      |

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