

# Edgetek™ PI-40GF/000 BLACK

Polyether Imide

PolyOne Corporation

## Message:

Edgetek™PI-40GF/000 BLACK is a polyetherimide (PEI) product that contains a 40% glass fiber reinforced material. It can be processed by injection molding and is available in the Asia-Pacific region. The main characteristics are: flame retardant/rated flame.

| General Information                                                                        |                                                       |                   |             |
|--------------------------------------------------------------------------------------------|-------------------------------------------------------|-------------------|-------------|
| Filler / Reinforcement                                                                     | Glass fiber reinforced material, 40% filler by weight |                   |             |
| Appearance                                                                                 | Black                                                 |                   |             |
| Processing Method                                                                          | Injection molding                                     |                   |             |
| Physical                                                                                   | Nominal Value                                         | Unit              | Test Method |
| Specific Gravity                                                                           | 1.60                                                  | g/cm <sup>3</sup> | ASTM D792   |
| Molding Shrinkage - Flow                                                                   | 0.10 - 0.40                                           | %                 | ASTM D955   |
| Mechanical                                                                                 | Nominal Value                                         | Unit              | Test Method |
| Tensile Modulus <sup>1</sup>                                                               | 11000                                                 | MPa               | ASTM D638   |
| Tensile Strength <sup>2</sup>                                                              | 172                                                   | MPa               | ASTM D638   |
| Tensile Elongation <sup>3</sup> (Break)                                                    | 2.5                                                   | %                 | ASTM D638   |
| Flexural Modulus <sup>4</sup>                                                              | 11000                                                 | MPa               | ASTM D790   |
| Flexural Strength <sup>5</sup>                                                             | 241                                                   | MPa               | ASTM D790   |
| Impact                                                                                     | Nominal Value                                         | Unit              | Test Method |
| Notched Izod Impact (23°C, 3.20 mm)                                                        | 120                                                   | J/m               | ASTM D256   |
| Thermal                                                                                    | Nominal Value                                         | Unit              | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed, 3.20 mm)                           | 209                                                   | °C                | ASTM D648   |
| Flammability                                                                               | Nominal Value                                         | Test Method       |             |
| Flame Rating (1.60 mm)                                                                     | V-0                                                   | UL 94             |             |
| Injection                                                                                  | Nominal Value                                         | Unit              |             |
| Drying Temperature                                                                         | 135 - 150                                             | °C                |             |
| Drying Time                                                                                | 4.0 - 5.0                                             | hr                |             |
| Rear Temperature                                                                           | 350 - 400                                             | °C                |             |
| Middle Temperature                                                                         | 350 - 400                                             | °C                |             |
| Front Temperature                                                                          | 350 - 400                                             | °C                |             |
| Mold Temperature                                                                           | 135 - 165                                             | °C                |             |
| Injection instructions                                                                     |                                                       |                   |             |
| Injection Pressure: MED-HIGHHold Pressure: MED-HIGHScrew Speed: MODERATEBack Pressure: LOW |                                                       |                   |             |
| NOTE                                                                                       |                                                       |                   |             |
| 1.                                                                                         | 5.0 mm/min                                            |                   |             |
| 2.                                                                                         | 5.0 mm/min                                            |                   |             |
| 3.                                                                                         | 5.0 mm/min                                            |                   |             |
| 4.                                                                                         | 1.3 mm/min                                            |                   |             |

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### 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

