

# Zytel® 70G43L NC010

NYLON RESIN  
DuPont Performance Polymers

Message:  
43% Glass Reinforced Polyamide 66

| General Information                |      |                                                        |                    |             |
|------------------------------------|------|--------------------------------------------------------|--------------------|-------------|
| UL YellowCard                      |      | E41938-234412                                          |                    |             |
| Filler / Reinforcement             |      | Glass Fiber,43% Filler by Weight                       |                    |             |
| Additive                           |      | Lubricant                                              |                    |             |
|                                    |      | Mold Release                                           |                    |             |
| Features                           |      | Lubricated                                             |                    |             |
| Agency Ratings                     |      | UL Unspecified Rating                                  |                    |             |
| Forms                              |      | Pellets                                                |                    |             |
| Processing Method                  |      | Injection Molding                                      |                    |             |
| Multi-Point Data                   |      | Isothermal Stress vs. Strain (ISO 11403-1)             |                    |             |
|                                    |      | Secant Modulus vs. Strain (ISO 11403-1)                |                    |             |
|                                    |      | Shear Modulus vs. Temperature (ISO 11403-1)            |                    |             |
|                                    |      | Shear Stress vs. Shear Rate (ISO 11403-1)              |                    |             |
|                                    |      | Specific Volume vs Temperature (ISO 11403-2)           |                    |             |
|                                    |      | Tensile Modulus vs. Temperature (ISO 11403-1)          |                    |             |
|                                    |      | Tensile Modulus vs. Temperature, Dynamic (ISO 11403-1) |                    |             |
|                                    |      | Viscosity vs. Shear Rate (ISO 11403-2)                 |                    |             |
| Part Marking Code (ISO 11469)      |      | >PA66-GF43<                                            |                    |             |
| Resin ID (ISO 1043)                |      | PA66-GF43                                              |                    |             |
| Physical                           | Dry  | Conditioned                                            | Unit               | Test Method |
| Density                            | 1.49 | --                                                     | g/cm <sup>3</sup>  | ISO 1183    |
| Molding Shrinkage                  |      |                                                        |                    | ISO 294-4   |
| Across Flow                        | 1.0  | --                                                     | %                  |             |
| Flow                               | 0.30 | --                                                     | %                  |             |
| Water Absorption                   |      |                                                        |                    |             |
| 24 hr                              | 0.90 | --                                                     | %                  | ASTM D570   |
| 23°C, 24 hr, 2.00 mm               | 4.7  | --                                                     | %                  | ISO 62      |
| Equilibrium, 23°C, 2.00 mm, 50% RH | 1.5  | --                                                     | %                  | ISO 62      |
| Viscosity Number                   | 130  | --                                                     | cm <sup>3</sup> /g | ISO 307     |
| Hardness                           | Dry  | Conditioned                                            | Unit               | Test Method |
| Rockwell Hardness                  |      |                                                        |                    | ISO 2039-2  |

|                                           |            |                    |                   |                    |
|-------------------------------------------|------------|--------------------|-------------------|--------------------|
| M-Scale                                   | 105        | 90                 |                   |                    |
| R-Scale                                   | 125        | 118                |                   |                    |
| <b>Mechanical</b>                         | <b>Dry</b> | <b>Conditioned</b> | <b>Unit</b>       | <b>Test Method</b> |
| Tensile Modulus                           | 14000      | 11000              | MPa               | ISO 527-2          |
| Tensile Stress (Break)                    | 225        | 160                | MPa               | ISO 527-2          |
| Tensile Strain (Break)                    | 3.0        | 4.0                | %                 | ISO 527-2          |
| Tensile Creep Modulus                     |            |                    |                   | ISO 899-1          |
| 1 hr                                      | --         | 10800              | MPa               |                    |
| 1000 hr                                   | --         | 7960               | MPa               |                    |
| Flexural Modulus                          | 12000      | 8900               | MPa               | ISO 178            |
| Flexural Stress                           | 340        | 260                | MPa               | ISO 178            |
| <b>Impact</b>                             | <b>Dry</b> | <b>Conditioned</b> | <b>Unit</b>       | <b>Test Method</b> |
| Charpy Notched Impact Strength            |            |                    |                   | ISO 179/1eA        |
| -40°C                                     | 11         | 11                 | kJ/m <sup>2</sup> |                    |
| -30°C                                     | 12         | 12                 | kJ/m <sup>2</sup> |                    |
| 23°C                                      | 16         | 19                 | kJ/m <sup>2</sup> |                    |
| Charpy Unnotched Impact Strength          |            |                    |                   | ISO 179/1eU        |
| -30°C                                     | 85         | 75                 | kJ/m <sup>2</sup> |                    |
| 23°C                                      | 100        | 110                | kJ/m <sup>2</sup> |                    |
| Notched Izod Impact Strength              |            |                    |                   | ISO 180/1A         |
| -40°C                                     | 11         | 11                 | kJ/m <sup>2</sup> |                    |
| -30°C                                     | 12         | 11                 | kJ/m <sup>2</sup> |                    |
| 23°C                                      | 14         | 16                 | kJ/m <sup>2</sup> |                    |
| Unnotched Izod Impact Strength            |            |                    |                   | ISO 180/1U         |
| -30°C                                     | 110        | 65                 | kJ/m <sup>2</sup> |                    |
| 23°C                                      | 110        | 90                 | kJ/m <sup>2</sup> |                    |
| <b>Thermal</b>                            | <b>Dry</b> | <b>Conditioned</b> | <b>Unit</b>       | <b>Test Method</b> |
| Heat Deflection Temperature               |            |                    |                   |                    |
| 0.45 MPa, Unannealed                      | 262        | --                 | °C                | ISO 75-2/B         |
| 1.8 MPa, Unannealed                       | 255        | --                 | °C                | ISO 75-2/A         |
| Glass Transition Temperature <sup>1</sup> | 80.0       | --                 | °C                | ISO 11357-2        |
| Vicat Softening Temperature               | 255        | --                 | °C                | ISO 306/B50        |
| Melting Temperature <sup>2</sup>          | 262        | --                 | °C                | ISO 11357-3        |
| CLTE                                      |            |                    |                   | ISO 11359-2        |
| Flow                                      | 1.5E-5     | --                 | cm/cm/°C          |                    |
| Transverse                                | 7.9E-5     | --                 | cm/cm/°C          |                    |
| <b>Electrical</b>                         | <b>Dry</b> | <b>Conditioned</b> | <b>Unit</b>       | <b>Test Method</b> |

|                                |           |             |                   |                      |
|--------------------------------|-----------|-------------|-------------------|----------------------|
| Surface Resistivity            | --        | 1.0E+12     | ohms              | IEC 60093            |
| Volume Resistivity             | > 1.0E+15 | 1.0E+12     | ohms·cm           | IEC 60093            |
| Electric Strength              | 27        | --          | kV/mm             | IEC 60243-1          |
| Relative Permittivity          |           |             |                   | IEC 60250            |
| 100 Hz                         | 4.50      | --          |                   |                      |
| 1 MHz                          | 4.10      | 4.90        |                   |                      |
| Dissipation Factor             |           |             |                   | IEC 60250            |
| 100 Hz                         | 0.010     | --          |                   |                      |
| 1 MHz                          | 0.015     | 0.060       |                   |                      |
| Flammability                   | Dry       | Conditioned | Unit              | Test Method          |
| Burning Rate (1.00 mm)         | 27        | --          | mm/min            | ISO 3795             |
| Flammability Classification    |           |             |                   | IEC 60695-11-10, -20 |
| 0.710 mm                       | HB        | --          |                   |                      |
| 1.50 mm                        | HB        | --          |                   |                      |
| Oxygen Index                   | 23        | --          | %                 | ISO 4589-2           |
| Fill Analysis                  | Dry       | Conditioned | Unit              |                      |
| Melt Density                   | 1.29      | --          | g/cm <sup>3</sup> |                      |
| Specific Heat Capacity of Melt | 2050      | --          | J/kg/°C           |                      |
| Thermal Conductivity of Melt   | 0.25      | --          | W/m/K             |                      |
| NOTE                           |           |             |                   |                      |
| 1.                             | 10°C/min  |             |                   |                      |
| 2.                             | 10°C/min  |             |                   |                      |

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



WECHAT