

# Crastin® S620F20 NC010

THERMOPLASTIC POLYESTER RESIN

DuPont Performance Polymers

## Message:

Unreinforced Medium Viscosity Polybutylene Terephthalate

| General Information                       |                                             |          |             |
|-------------------------------------------|---------------------------------------------|----------|-------------|
| UL YellowCard                             | E41938-257811                               |          |             |
| Additive                                  | Mold Release                                |          |             |
| 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)   |          |             |
|                                           | Viscosity vs. Shear Rate (ISO 11403-2)      |          |             |
|                                           |                                             |          |             |
| Part Marking Code (ISO 11469)             | >PBT<                                       |          |             |
| Resin ID (ISO 1043)                       | PBT                                         |          |             |
| Physical                                  | Nominal Value                               | Unit     | Test Method |
| Density                                   | 1.31                                        | g/cm³    | ISO 1183    |
| Melt Mass-Flow Rate (MFR) (250°C/2.16 kg) | 19                                          | g/10 min | ISO 1133    |
| Molding Shrinkage                         |                                             |          | ISO 294-4   |
| Across Flow                               | 1.6                                         | %        |             |
| Flow                                      | 1.7                                         | %        |             |
| Water Absorption                          |                                             |          | ISO 62      |
| 23°C, 24 hr, 2.00 mm                      | 0.40                                        | %        |             |
| Equilibrium, 23°C, 2.00 mm, 50% RH        | 0.20                                        | %        |             |
| Viscosity Number                          | 130                                         | cm³/g    | ISO 307     |
| Mechanical                                | Nominal Value                               | Unit     | Test Method |
| Tensile Modulus                           | 2600                                        | MPa      | ISO 527-2   |
| Tensile Stress (Yield)                    | 59.0                                        | MPa      | ISO 527-2   |
| Tensile Strain (Yield)                    | 8.0                                         | %        | ISO 527-2   |
| Nominal Tensile Strain at Break           | 30                                          | %        | ISO 527-2   |
| Tensile Creep Modulus                     |                                             |          | ISO 899-1   |
| 1 hr                                      | 2600                                        | MPa      |             |
| 1000 hr                                   | 1800                                        | MPa      |             |
| Flexural Stress                           | 88.0                                        | MPa      | ISO 178     |

| Impact                           | Nominal Value | Unit              | Test Method          |
|----------------------------------|---------------|-------------------|----------------------|
| Charpy Notched Impact Strength   |               |                   | ISO 179/1eA          |
| -30°C                            | 3.5           | kJ/m <sup>2</sup> |                      |
| 23°C                             | 4.5           | kJ/m <sup>2</sup> |                      |
| Charpy Unnotched Impact Strength |               |                   | ISO 179/1eU          |
| -30°C                            | No Break      |                   |                      |
| 23°C                             | No Break      |                   |                      |
| Notched Izod Impact Strength     |               |                   | ISO 180/1A           |
| -30°C                            | 5.0           | kJ/m <sup>2</sup> |                      |
| 23°C                             | 4.0           | kJ/m <sup>2</sup> |                      |
| Unnotched Izod Impact Strength   |               |                   | ISO 180/1U           |
| -30°C                            | 70            | kJ/m <sup>2</sup> |                      |
| 23°C                             | 140           | kJ/m <sup>2</sup> |                      |
| Thermal                          | Nominal Value | Unit              | Test Method          |
| Heat Deflection Temperature      |               |                   |                      |
| 0.45 MPa, Unannealed             | 145           | °C                | ISO 75-2/B           |
| 0.45 MPa, Annealed               | 180           | °C                | ISO 75-2/B           |
| 1.8 MPa, Unannealed              | 60.0          | °C                | ISO 75-2/A           |
| 1.8 MPa, Annealed                | 60.0          | °C                | ISO 75-2/A           |
| Vicat Softening Temperature      | 175           | °C                | ISO 306/B50          |
| Melting Temperature <sup>1</sup> | 225           | °C                | ISO 11357-3          |
| CLTE                             |               |                   | ISO 11359-2          |
| Flow                             | 1.3E-4        | cm/cm/°C          |                      |
| Transverse                       | 1.3E-4        | cm/cm/°C          |                      |
| Electrical                       | Nominal Value | Unit              | Test Method          |
| Volume Resistivity               | > 1.0E+15     | ohms · cm         | IEC 60093            |
| Electric Strength                | 26            | kV/mm             | IEC 60243-1          |
| Relative Permittivity            |               |                   | IEC 60250            |
| 100 Hz                           | 3.80          |                   |                      |
| 1 MHz                            | 3.20          |                   |                      |
| Dissipation Factor               |               |                   | IEC 60250            |
| 100 Hz                           | 2.0E-3        |                   |                      |
| 1 MHz                            | 0.020         |                   |                      |
| Comparative Tracking Index       | 600           | V                 | IEC 60112            |
| Flammability                     | Nominal Value | Unit              | Test Method          |
| Flammability Classification      |               |                   | IEC 60695-11-10, -20 |
| 0.800 mm                         | HB            |                   |                      |
| 1.50 mm                          | HB            |                   |                      |
| Oxygen Index                     | 22            | %                 | ISO 4589-2           |
| Fill Analysis                    | Nominal Value | Unit              |                      |
| Melt Density                     | 1.11          | g/cm <sup>3</sup> |                      |
| Specific Heat Capacity of Melt   | 2100          | J/kg/°C           |                      |

|                              |          |       |
|------------------------------|----------|-------|
| Thermal Conductivity of Melt | 0.21     | W/m/K |
| NOTE                         |          |       |
| 1.                           | 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

