

# Rynite® 530HTE NC010

THERMOPLASTIC POLYESTER RESIN

DuPont Performance Polymers

## Message:

30% Glass Reinforced Polyethylene Terephthalate with Excellent High Temperature Dielectric Properties

| General Information                         |                                                       |           |             |
|---------------------------------------------|-------------------------------------------------------|-----------|-------------|
| UL YellowCard                               | E41938-257702                                         |           |             |
| Filler / Reinforcement                      | Glass fiber reinforced material, 30% filler by weight |           |             |
| Additive                                    | heat stabilizer                                       |           |             |
| Features                                    | Thermal Stability                                     |           |             |
| RoHS Compliance                             | Contact manufacturer                                  |           |             |
| Forms                                       | Particle                                              |           |             |
| Processing Method                           | Injection molding                                     |           |             |
| Multi-Point Data                            | Shear Stress vs. Shear Rate (ISO 11403-1)             |           |             |
|                                             | Viscosity vs. Shear Rate (ISO 11403-2)                |           |             |
|                                             |                                                       |           |             |
| Part Marking Code (ISO 11469)               | >PET-GF30                                             |           |             |
| Resin ID (ISO 1043)                         | PET-GF30                                              |           |             |
| Physical                                    | Nominal Value                                         | Unit      | Test Method |
| Density                                     | 1.56                                                  | g/cm³     | ISO 1183    |
| Melt Volume-Flow Rate (MVR) (280°C/2.16 kg) | 9.00                                                  | cm³/10min | ISO 1133    |
| Molding Shrinkage                           |                                                       |           | ISO 294-4   |
| Transverse flow                             | 0.60                                                  | %         | ISO 294-4   |
| Flow                                        | 0.10                                                  | %         | ISO 294-4   |
| Mechanical                                  | Nominal Value                                         | Unit      | Test Method |
| Tensile Modulus                             | 11000                                                 | MPa       | ISO 527-2   |
| Tensile Stress (Break)                      | 170                                                   | MPa       | ISO 527-2   |
| Tensile Strain (Break)                      | 2.3                                                   | %         | ISO 527-2   |
| Thermal                                     | Nominal Value                                         | Unit      | Test Method |
| Melting Temperature <sup>1</sup>            | 252                                                   | °C        | ISO 11357-3 |
| Electrical                                  | Nominal Value                                         | Unit      | Test Method |
| Surface Resistivity                         | 1.0E+14                                               | ohms      | IEC 60093   |
| Volume Resistivity                          | > 1.0E+15                                             | ohms · cm | IEC 60093   |
| Dielectric Strength                         | 38                                                    | kV/mm     | IEC 60243-1 |
| Relative Permittivity                       |                                                       |           | IEC 60250   |
| 100 Hz                                      | 4.20                                                  |           | IEC 60250   |
| 1 MHz                                       | 3.90                                                  |           | IEC 60250   |
| Dissipation Factor                          |                                                       |           | IEC 60250   |

| 100 Hz                              | 1.4E-3             |                   | IEC 60250                   |
|-------------------------------------|--------------------|-------------------|-----------------------------|
| 1 MHz                               | 0.015              |                   | IEC 60250                   |
| Comparative Tracking Index          | 200                | V                 | IEC 60112                   |
| Flammability                        | Nominal Value      | Unit              | Test Method                 |
| Burning Rate <sup>2</sup> (1.00 mm) | < 100              | mm/min            | ISO 3795                    |
| Flame Rating (0.9 mm)               | HB                 |                   | UL 94, IEC 60695-11-10, -20 |
| FMVSS Flammability                  | B                  |                   | FMVSS 302                   |
| Specific Heat Capacity of Melt      | 1500               | J/kg/°C           |                             |
| Thermal Conductivity of Melt        | 0.29               | W/m/K             |                             |
| Melt Temperature, Optimum           | 285                | °C                |                             |
| Mold Temperature, Optimum           | 140                | °C                |                             |
| Back Pressure                       | As low as possible |                   |                             |
| Drying Recommended                  | yes                |                   |                             |
| Hold Pressure Time                  | 4.00               | s/mm              |                             |
| Maximum Screw Tangential Speed      | 200                | mm/sec            |                             |
| Fill Analysis                       | Nominal Value      | Unit              |                             |
| Melt Density                        | 1.36               | g/cm <sup>3</sup> |                             |
| Ejection Temperature                | 170                | °C                |                             |
| Injection                           | Nominal Value      | Unit              |                             |
| Drying Temperature                  | 120                | °C                |                             |
| Drying Time - Desiccant Dryer       | 4.0 - 6.0          | hr                |                             |
| Suggested Max Moisture              | 0.020              | %                 |                             |
| Processing (Melt) Temp              | 280 - 300          | °C                |                             |
| Mold Temperature                    | 120 - 140          | °C                |                             |
| Holding Pressure                    | 80.0               | MPa               |                             |
| NOTE                                |                    |                   |                             |
| 1.                                  | 10°C/min           |                   |                             |
| 2.                                  | FMVSS 302          |                   |                             |

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