

# Edistir® RC 600

Medium Impact Polystyrene

Versalis S.p.A.

## Message:

Special medium impact polystyrene grade exhibiting very high gloss.

This grade is designed to be used in injection moulding where is required an excellent surface finish.

Designation: Thermoplastics ISO 2897-PS-I,M,O88-O6-04-18

## Applications

Examples of application are consumer electronics, office furnishings, internal components of refrigerators, sanitary and household wares, jewel and cosmetic boxes.

| General Information                      |                                              |                   |                 |
|------------------------------------------|----------------------------------------------|-------------------|-----------------|
| UL YellowCard                            | E157138-101325088                            |                   |                 |
| Features                                 | Highlight                                    |                   |                 |
|                                          | Compliance of Food Exposure                  |                   |                 |
|                                          | Excellent appearance                         |                   |                 |
|                                          | Medium impact resistance                     |                   |                 |
| Uses                                     | Cosmetic Packaging                           |                   |                 |
|                                          | Electrical/Electronic Applications           |                   |                 |
|                                          | Home appliance components                    |                   |                 |
|                                          | Household goods                              |                   |                 |
|                                          | Business equipment                           |                   |                 |
|                                          | Bathroom products                            |                   |                 |
| Agency Ratings                           | Europe No 10/2011                            |                   |                 |
| UL File Number                           | E83071                                       |                   |                 |
| Appearance                               | Natural color                                |                   |                 |
| Forms                                    | Particle                                     |                   |                 |
| 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)  |                   |                 |
|                                          | Specific Volume vs Temperature (ISO 11403-2) |                   |                 |
|                                          | Viscosity vs. Shear Rate (ISO 11403-2)       |                   |                 |
| Physical                                 | Nominal Value                                | Unit              | Test Method     |
| Density                                  | 1.04                                         | g/cm <sup>3</sup> | ISO 1183        |
| Apparent Density                         | 0.65                                         | g/cm <sup>3</sup> | ISO 60          |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 6.0                                          | g/10 min          | ISO 1133        |
| Molding Shrinkage                        | 0.40 - 0.70                                  | %                 | Internal method |
| Water Absorption (23°C, 24 hr)           | < 0.10                                       | %                 | ISO 62          |

| Hardness                                              | Nominal Value                               | Unit              | Test Method    |
|-------------------------------------------------------|---------------------------------------------|-------------------|----------------|
| Rockwell Hardness (L-Scale)                           | 80                                          |                   | ISO 2039-2     |
| Mechanical                                            | Nominal Value                               | Unit              | Test Method    |
| Tensile Modulus                                       | 1950                                        | MPa               | ISO 527-2/1    |
| Tensile Stress                                        |                                             |                   | ISO 527-2/50   |
| Yield                                                 | 29.0                                        | MPa               | ISO 527-2/50   |
| Fracture                                              | 24.5                                        | MPa               | ISO 527-2/50   |
| Tensile Strain (Break)                                | 40                                          | %                 | ISO 527-2/50   |
| Flexural Stress <sup>1</sup>                          | 53.0                                        | MPa               | ISO 178        |
| Impact                                                | Nominal Value                               | Unit              | Test Method    |
| Notched Izod Impact                                   |                                             |                   |                |
| 23°C, 3.20 mm                                         | 70                                          | J/m               | ISO 180/4A     |
| -30°C                                                 | 3.5                                         | kJ/m <sup>2</sup> | ISO 180/1A     |
| 23°C                                                  | 5.5                                         | kJ/m <sup>2</sup> | ISO 180/1A     |
| Thermal                                               | Nominal Value                               | Unit              | Test Method    |
| Deflection Temperature Under Load (1.8 MPa, Annealed) | 81.0                                        | °C                | ASTM D648      |
| Vicat Softening Temperature                           |                                             |                   |                |
| --                                                    | 96.0                                        | °C                | ISO 306/A50    |
| --                                                    | 88.0                                        | °C                | ISO 306/B50    |
| CLTE - Flow                                           | 9.0E-5                                      | cm/cm/°C          | ASTM D696      |
| Thermal Conductivity                                  | 0.17                                        | W/m/K             | ISO 8302       |
| Electrical                                            | Nominal Value                               | Unit              | Test Method    |
| Surface Resistivity                                   | > 1.5E+15                                   | ohms              | IEC 60093      |
| Volume Resistivity                                    | > 7.0E+15                                   | ohms · cm         | IEC 60093      |
| Dielectric Strength                                   | 65                                          | kV/mm             | IEC 60243-1    |
| Dielectric Constant (50 Hz)                           | 2.50                                        |                   | IEC 60250      |
| Dissipation Factor (50 Hz)                            | 3.0E-4                                      |                   | IEC 60250      |
| Comparative Tracking Index (Solution A)               | 550                                         | V                 | IEC 60112      |
| Flammability                                          | Nominal Value                               | Unit              | Test Method    |
| Flame Rating (1.50 mm, All Colors)                    | HB                                          |                   | UL 94          |
| Glow Wire Ignition Temperature (1.60 mm)              | 650                                         | °C                | IEC 60695-2-13 |
| Additional Information                                | Nominal Value                               |                   |                |
| Designation                                           | Thermoplastics ISO 2897-PS-I,M,088-06-04-18 |                   |                |
| Injection                                             | Nominal Value                               | Unit              |                |
| Processing (Melt) Temp                                | 200 - 250                                   | °C                |                |
| Mold Temperature                                      | 40.0 - 75.0                                 | °C                |                |
| Injection instructions                                |                                             |                   |                |
| Predrying normally not required                       |                                             |                   |                |
| NOTE                                                  |                                             |                   |                |

1. 2.0 mm/min

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