# Edistir® N 1840

General Purpose Polystyrene

Versalis S.p.A.

## Message:

General purpose polystyrene combining easy flow and medium heat.
Edistir N 1840 is suggested in extrusion for glossy capping of HIPS sheets and for blending with HIPS or clear SBS for stiffer thermoformable sheets.
This grade exhibits excellent processability in injection moulding and it is recommended for complex and thin-wall parts and fast moulding cycles.
Designation: Thermoplastics ISO 1622-PS,G,085—12
Applications
Thermoformed disposable packaging and glossy sheets for industrial and fridge applications. Injection moulded beverage cups, point of sales, containers for foods and cosmetics, toys, housewares, medical articles (Petri dishes).

| General Information | |
|---|---|
| Features | Highlight |
| | Workability, good |
| | Fast molding cycle |
| | Good liquidity |
| | Heat resistance, medium |
| | Compliance of Food Exposure |
| | General |
| Uses | Thin wall parts |
| | Cup |
| | Low temperature application |
| | Industrial application |
| | Cosmetics |
| | Mixing |
| | Household goods |
| | Sheet |
| | Food container |
| | Tread rubber |
| | General |
| | Toys |
| | Medical/nursing supplies |
| Agency Ratings | Europe No 10/2011 |
| UL File Number | E83071 |
| Appearance | Clear/transparent |
| | Natural color |
| Forms | Particle |
| Processing Method | Extrusion |

| | |
|---|---|
| | Sheet extrusion molding |
| | Thermoforming |
| | 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 Heat vs. Temperature (ISO 11403-2) |
| | Specific Volume vs Temperature (ISO 11403-2) |
| | Viscosity vs. Shear Rate (ISO 11403-2) |

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Density | 1.05 | g/cm³ | ISO 1183 |
| Apparent Density | 0.65 | g/cm³ | ISO 60 |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 10 | g/10 min | ISO 1133 |
| Molding Shrinkage | 0.30 - 0.60 | % | Internal method |
| Water Absorption (23°C, 24 hr) | < 0.10 | % | ISO 62 |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Rockwell Hardness (M-Scale) | 80 | | ISO 2039-2 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | 3250 | MPa | ISO 527-2/1 |
| Tensile Stress (Break) | 39.0 | MPa | ISO 527-2/5 |
| Tensile Strain (Break) | 1.8 | % | ISO 527-2/5 |
| Flexural Stress [1] | 69.0 | MPa | ISO 178 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Notched Izod Impact [2] | | | ISO 180/1A |
| -30°C | 1.5 | kJ/m² | ISO 180/1A |
| 23°C | 1.7 | kJ/m² | ISO 180/1A |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load (1.8 MPa, Annealed) | 84.0 | °C | ASTM D648 |
| Vicat Softening Temperature | | | |
| -- | 92.0 | °C | ISO 306/A50 |
| -- | 88.0 | °C | ISO 306/B50 |
| CLTE - Flow | 7.0E-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 | 70 | kV/mm | IEC 60243-1 |
| Dielectric Constant (50 Hz) | 2.50 | | IEC 60250 |
| Dissipation Factor (50 Hz) | 2.0E-4 | | IEC 60250 |

| | | | |
|---|---|---|---|
| Comparative Tracking Index (Solution A) | 375 | 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 1622-PS,G,085-12 | | |
| Injection | Nominal Value | Unit | |
| Processing (Melt) Temp | 200 - 250 | °C | |
| Mold Temperature | 10.0 - 50.0 | °C | |
| Injection instructions | | | |
| Predrying normally not required. | | | |
| Extrusion | Nominal Value | Unit | |
| Melt Temperature | 210 - 240 | °C | |
| NOTE | | | |
| 1. | 2.0 mm/min | | |
| 2. | 4mm | | |



## Recommended distributors for this material

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