

# ER400-C

Injection and Extrusion molding

## Description

- Medium Heat, High Impact

## Applications

- Automotives Interior & Exterior Housing, Sheet Extrusion

| Properties  | Method     | Unit     | ER400-C   |
|---|------------|----------|-----------|
| <b>Physical</b>                                     |            |          |           |
| Specific Gravity , 23°C                             | ASTM D792  |          | 1.04      |
| Mold Shrinkage , 23°C, 3.2mm , 23°C                 | ASTM D792  | %        | 0.4 ~ 0.8 |
| Melt Flow Rate , 220°C, 10kg                        | ASTM D1238 | g/10min  | 7         |
| <b>Mechanical</b>                                   |            |          |           |
| Tensile Strength at Yield , 23°C, 50mm/min, 3.2mm   | ASTM D638  | MPa      | 51        |
| Tensile Elongation at Break , 23°C, 50mm/min, 3.2mm | ASTM D638  | %, (Min) | 10        |
| Tensile Modulus , 23°C, 50mm/min, 3.2mm             | ASTM D638  | MPa      | 2400      |
| Flexural Strength , 23°C, 15mm/min, 3.2mm           | ASTM D790  | MPa      | 82        |
| Flexural Modulus , 23°C, 15mm/min, 3.2mm            | ASTM D790  | MPa      | 2600      |
| Izod Impact Strength , Notched, 3.2mm, 23°C         | ASTM D256  | J/m      | 310       |
| Izod Impact Strength , Notched, 3.2mm, -30°C        | ASTM D256  | J/m      | 100       |
| Izod Impact Strength , Notched, 6.4mm, 23°C         | ASTM D256  | J/m      | 220       |
| Izod Impact Strength , Notched, 6.4mm, -30°C        | ASTM D256  | J/m      | 90        |
| Rockwell Hardness , R-Scale                         | ASTM D785  |          | 109       |
| <b>Thermal</b>                                      |            |          |           |
| HDT , Edgewise, 1.82MPa, 6.4mm, Unannealed          | ASTM D648  | °C       | 92        |
| VICAT , 50N, 50°C/h                                 | ASTM D1525 | °C       | 101       |
| RTI Electrical                                      | UL 746B    | °C       | 60        |
| RTI Mechanical with Impact                          | UL 746B    | °C       | 60        |
| RTI Mechanical without Impact                       | UL 746B    | °C       | 60        |
| Flammability, 1.5mm                                 | UL 94      |          | HB        |
| Flammability, 3.0mm                                 | UL 94      |          | HB        |

## Note

Typical values can be used only for the purpose of selecting material, and there can be variation within normal tolerances for various colors. Values given should not be interpreted as specification and not be used for designing part or tool. All properties, except melt flow rate are measured by injection molded specimens after 48 hours storage at 23°C, 50% relative humidity.

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## Processing Guide (Injection Molding)

| Processing Parameters         | Unit               | Value     |
|-------------------------------|--------------------|-----------|
| Drying Temperature            | °C                 | 80 ~ 90   |
| Drying Time                   | hrs                | 3 ~ 4     |
| Moisture Content              | %                  | ~ 0.07    |
| Melt Temperature              | °C                 | 230 ~ 260 |
| Nozzle Temperature            | °C                 | 230 ~ 240 |
| Mold Temperature              | °C                 | 40 ~ 60   |
| Back Pressure, Hydraulic Type | kg/cm <sup>2</sup> | 10 ~ 30   |

## Note

Back Pressure & Measuring Speed are only mentioned as general guidelines.

These may not apply or need adjustment in specific situations such as low shot sizes, thin wall molding and gas-assist molding.

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