

Technical Data Sheet

HIPS(High Impact Poly Styrene) HI 470R

Features ESCR, Deep draw thermoforming
Applications Door liner, Refrigerator inner liner

| Physical | Test Method | Value |
|------------------------------|-------------|------------------------|
| Density | ASTM D792 | 1.03 g/cm ³ |
| Melt Flow Index (200°C, 5kg) | ASTM D1238 | 4.0 g/10min |
| Mold Shrinkage | ASTM D955 | 0.3 ~ 0.6 % |
| Water absorption | ASTM D570 | 0.03 % |

| Mechanical | Test Method | Value |
|-----------------------------|-------------|--|
| Tensile Strength | ASTM D638 | 185 kg/cm ² (2,627) (psi) |
| Elongation | ASTM D638 | 80 % |
| Flexural Strength | ASTM D790 | 207 kg/cm ² (2,939) (psi) |
| Flexural Modulus | ASTM D790 | 13,700 kg/cm ² (194,500) (psi) |
| Izod Impact Strength(3.2mm) | ASTM D256 | 10.0 kgcm/cm (1.85) (ft-lb/in) |
| Rockwell Hardness(L scale) | ASTM D785 | 50 |

| Thermal | Test Method | Value |
|---|-------------|---------------------|
| Heat Deflection Temperature(18.6kgf/cm ²) | ASTM D648 | 77 °C (170) (°F) |
| Vicat Softening Temperature(1kg, 50°C/h) | ASTM D1525 | 99 °C (210) (°F) |

| Flammability | Test Method | Value |
|---------------------------|-------------|-------|
| Flame Rating - UL (1.6mm) | UL 94 | HB |

Notes

These are just typical properties, not specifications. Users should confirm results by their own test.

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Processing guide

| Injection Guide | Unit | Value |
|------------------------|-------------|--------------|
| Nozzle | °C | 190~220 |
| Front | °C | 190~210 |
| Middle | °C | 180~200 |
| Rear | °C | 170~190 |
| Hopper Throat | °C | 45 |
| Mold | °C | 40~60 |

| Extrusion Guide | Unit | Value |
|------------------------|-------------|--------------|
| Zone 1 | °C | 170~190 |
| Zone 2 | °C | 180~200 |
| Zone 3 | °C | 180~210 |
| Zone 4 | °C | 190~220 |
| Zone 5 | °C | 200~220 |
| Screen Changer | °C | 190~210 |
| Adaptor | °C | 200 |
| Die | °C | 190~210 |

| Drying | Unit | Value |
|---------------|-------------|--------------|
| Temperature | °C | 60~70 |
| Time | hr | 1~3 |

Notes

These are only mentioned as general guidelines.