

# ShinkoLite-P UT-200

Polymethyl Methacrylate Acrylic

Mitsubishi Rayon America Inc.

## Technical Data

### General

|                   |                                                                                                                                                                      |                                                                                                                                                          |                                                                                            |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Features          | <ul style="list-style-type: none"><li>• Good Chemical Resistance</li><li>• Good Dimensional Stability</li><li>• Good Flow</li><li>• Good Impact Resistance</li></ul> | <ul style="list-style-type: none"><li>• Good Moldability</li><li>• Good Weather Resistance</li><li>• High Gloss</li><li>• High Heat Resistance</li></ul> | <ul style="list-style-type: none"><li>• Low to No Odor</li><li>• Low to No Taste</li></ul> |
| Uses              | <ul style="list-style-type: none"><li>• Rods</li></ul>                                                                                                               | <ul style="list-style-type: none"><li>• Tubing</li></ul>                                                                                                 |                                                                                            |
| Appearance        | <ul style="list-style-type: none"><li>• Clear/Transparent</li></ul>                                                                                                  |                                                                                                                                                          |                                                                                            |
| Forms             | <ul style="list-style-type: none"><li>• Pellets</li></ul>                                                                                                            |                                                                                                                                                          |                                                                                            |
| Processing Method | <ul style="list-style-type: none"><li>• Extrusion</li></ul>                                                                                                          | <ul style="list-style-type: none"><li>• Injection Molding</li></ul>                                                                                      |                                                                                            |

| Physical                                  | Nominal Value Unit     | Test Method |
|-------------------------------------------|------------------------|-------------|
| Specific Gravity                          | 1.19 g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (230°C/10.0 kg) | 2.4 g/10 min           | ASTM D1238  |
| Molding Shrinkage - Flow                  | 0.20 to 0.50 %         | ASTM D955   |
| Water Absorption (24 hr)                  | 1.8 %                  | ASTM D570   |

| Mechanical                 | Nominal Value Unit | Test Method |
|----------------------------|--------------------|-------------|
| Tensile Strength (Yield)   | 76.6 MPa           | ASTM D638   |
| Tensile Elongation (Break) | 5.0 %              | ASTM D638   |
| Flexural Modulus           | 3190 MPa           | ASTM D790   |
| Flexural Strength (Yield)  | 118 MPa            | ASTM D790   |

| Impact              | Nominal Value Unit | Test Method |
|---------------------|--------------------|-------------|
| Notched Izod Impact | 15 J/m             | ASTM D256   |

| Hardness                    | Nominal Value Unit | Test Method |
|-----------------------------|--------------------|-------------|
| Rockwell Hardness (R-Scale) | 101                | ASTM D785   |

| Thermal                                                  | Nominal Value Unit | Test Method |
|----------------------------------------------------------|--------------------|-------------|
| Deflection Temperature Under Load<br>1.8 MPa, Unannealed | 115 °C             | ASTM D648   |

| Optical          | Nominal Value Unit | Test Method |
|------------------|--------------------|-------------|
| Refractive Index | 1.500              | ASTM D542   |
| Transmittance    | 93.0 %             | ASTM D1003  |
| Haze             | 0.30 %             | ASTM D1003  |

| Injection          | Nominal Value Unit |
|--------------------|--------------------|
| Drying Temperature | 80.0 to 90.0 °C    |
| Drying Time        | 4.0 to 6.0 hr      |
| Rear Temperature   | 240 to 270 °C      |
| Middle Temperature | 240 to 270 °C      |
| Front Temperature  | 240 to 270 °C      |
| Mold Temperature   | 70.0 to 100 °C     |
| Injection Pressure | 78.3 to 138 MPa    |

