

## Technical Data Sheet

### *Polyman* ABS M/TK K1458 GRY64702



Acrylonitrile Butadiene Styrene

#### Product Description

ABS Compound with increased heat distortion temperature. Suitable for food contact use.

**Processing Method** Injection Molding

**Resin ID** ABS

| Typical Properties                                                  | Nominal Value | Units                   | Test Method   |
|---------------------------------------------------------------------|---------------|-------------------------|---------------|
| <b>Physical</b>                                                     |               |                         |               |
| Melt Volume Flow Rate, (220 °C/10.0 kg)                             | 22            | cm <sup>3</sup> /10 min | ISO 1133      |
| Density, (Method A)                                                 | 1.04          | g/cm <sup>3</sup>       | ISO 1183      |
| <b>Mechanical</b>                                                   |               |                         |               |
| Tensile Stress at Yield, (Type 1A, 50 mm/min)                       | 53.0          | MPa                     | ISO 527-2     |
| Flexural Modulus                                                    | 3100          | MPa                     | ISO 178       |
| Tensile Strain at Yield, (Type 1A, 50 mm/min)                       | 3.2           | %                       | ISO 527-2     |
| Tensile Modulus, (1 mm/min, Type 1A)                                | 2800          | MPa                     | ISO 527-1     |
| Flexural Stress                                                     | 88            | MPa                     | ISO 178       |
| <b>Impact</b>                                                       |               |                         |               |
| Charpy Impact Strength - Notched                                    |               |                         |               |
| (23 °C, Type 1, Edgewise, Notch A)                                  | 12            | kJ/m <sup>2</sup>       | ISO 179       |
| (-30 °C, Type 1, Edgewise, Notch A)                                 | 8.0           | kJ/m <sup>2</sup>       | ISO 179       |
| Charpy Impact Strength - Unnotched                                  |               |                         |               |
| (23 °C, Type 1, Edgewise)                                           | No Break      |                         | ISO 179       |
| (-30 °C, Type 1, Edgewise)                                          | 87            | kJ/m <sup>2</sup>       | ISO 179       |
| <b>Hardness</b>                                                     |               |                         |               |
| Ball Indentation Hardness, (H 358/30)                               | 137           | MPa                     | ISO 2039-1    |
| <b>Thermal</b>                                                      |               |                         |               |
| Vicat Softening Temperature                                         |               |                         |               |
| (B (50N), 50 °C/h)                                                  | 102           | °C                      | ISO 306       |
| (A (10N), 50 °C/h)                                                  | 105           | °C                      | ISO 306       |
| Deflection Temperature Under Load Unannealed (0.45 MPa), (Flatwise) | 94.0          | °C                      | ISO 75-2/B    |
| Deflection Temperature Under Load Unannealed (1.80 MPa), (Flatwise) | 80.0          | °C                      | ISO 75-2/A    |
| <b>Electrical</b>                                                   |               |                         |               |
| Volume Resistivity                                                  | >1.0E+15      | ohm*m                   | IEC 62631-3-1 |
| Comparative Tracking Index (CTI)                                    | 600           | V                       | UL 746A       |
| Surface Resistivity                                                 | >1.0E+13      | ohm                     | IEC 60093     |

|                                |      |        |                      |
|--------------------------------|------|--------|----------------------|
| <b>Flammable</b>               |      |        |                      |
| Burning Rate                   |      |        |                      |
| (2.00 mm)                      | <100 | mm/min | ISO 3795             |
| (2.00 mm)                      | <100 | mm/min | FMVSS 302            |
| Glow Wire Ignition Temperature |      |        |                      |
| (1.5 mm)                       | 700  | °C     | IEC 60695-2-13       |
| (3.0 mm)                       | 700  | °C     | IEC 60695-2-13       |
| <b>UL Information</b>          |      |        |                      |
| Flammability Classification    |      |        |                      |
| (1.5 mm)                       | HB   |        | IEC 60695-11-10, -20 |
| (3.0 mm)                       | HB   |        | IEC 60695-11-10, -20 |

| <b>Injection Parameters</b> | <b>Nominal</b> |              |
|-----------------------------|----------------|--------------|
|                             | <b>Value</b>   | <b>Units</b> |
| Drying Time                 | 2.0 to 4.0     | hr           |
| Drying Temperature          | 80             | °C           |
| Processing (Melt) Temp      | 230 to 250     | °C           |
| Mold Temperature            | 40 to 80       | °C           |