

**SUMIPEX® MGSV**

PMMA

Sumitomo Chemical Co., Ltd.

| Processing/Physical Characteristics | Value | Unit    | Test Standard   |
|-------------------------------------|-------|---------|-----------------|
| <b>ISO Data</b>                     |       |         |                 |
| Melt flow index, MFI                | 20    | g/10min | ISO 1133        |
| Temperature                         | 230   | °C      | -               |
| Load                                | 3.8   | kg      | -               |
| Molding shrinkage, parallel         | 0.4   | %       | ISO 294-4, 2577 |

| Mechanical properties                 | Value | Unit              | Test Standard |
|---------------------------------------|-------|-------------------|---------------|
| <b>ISO Data</b>                       |       |                   |               |
| Stress at break                       | 70    | MPa               | ISO 527       |
| Strain at break                       | 2     | %                 | ISO 527       |
| Flexural modulus, 23°C                | 3100  | MPa               | ISO 178       |
| Charpy notched impact strength, +23°C | 1.1   | kJ/m <sup>2</sup> | ISO 179/1eA   |
| Rockwell hardness                     | M 95  | -                 | ISO 2039-2    |

| Thermal properties                          | Value                | Unit  | Test Standard   |
|---|----------------------|-------|-----------------|
| <b>ISO Data</b>                             |                      |       |                 |
| Temp. of deflection under load, 1.80 MPa    | 92 <sup>[ann.]</sup> | °C    | ISO 75-1/-2     |
| Vicat softening temperature, B              | 103                  | °C    | ISO 306         |
| Coeff. of linear therm. expansion, parallel | 70                   | E-6/K | ISO 11359-1/-2  |
| Burning behav. at thickness h               | HB                   | class | IEC 60695-11-10 |

ann.: annealed

| Electrical properties       | Value | Unit  | Test Standard |
|-----------------------------|-------|-------|---------------|
| <b>ISO Data</b>             |       |       |               |
| Relative permittivity, 1MHz | 3.1   | -     | IEC 62631-2-1 |
| Volume resistivity          | >1E13 | Ohm*m | IEC 62631-3-1 |
| Surface resistivity         | >1E15 | Ohm   | IEC 62631-3-2 |
| Electric strength           | 20    | kV/mm | IEC 60243-1   |

| Optical properties     | Value | Unit | Test Standard   |
|------------------------|-------|------|-----------------|
| <b>ISO Data</b>        |       |      |                 |
| Haze                   | 0.5   | -    | ISO 14782       |
| Luminous transmittance | 92    | %    | ISO 13468-1, -2 |

| Other properties | Value | Unit              | Test Standard  |
|------------------|-------|-------------------|----------------|
| Water absorption | 0.3   | %                 | Sim. to ISO 62 |
| Density          | 1190  | kg/m <sup>3</sup> | ISO 1183       |

| Processing Recommendation Injection Molding | Value     | Unit | Test Standard |
|---|-----------|------|---------------|
| Pre-drying - Temperature                    | 70 - 80   | °C   | -             |
| Pre-drying - Time                           | 4 - 6     | h    | -             |
| Mold temperature                            | 60 - 85   | °C   | -             |
| Zone 1                                      | 210 - 220 | °C   | -             |
| Zone 2                                      | 220 - 240 | °C   | -             |
| Zone 3                                      | 225 - 245 | °C   | -             |
| Screw speed                                 | 30 - 70   | rpm  | -             |
| Injection pressure                          | 140 - 160 | MPa  | -             |
| Back pressure                               | 1.1 - 1.4 | MPa  | -             |
| Holding pressure                            | 20 - 100  | MPa  | -             |

**Characteristics****Processing**

Injection Molding

**Chemical Resistance**

Alkali Resistance, General Chemical Resistance, Oil Resistance

**Special Characteristics**

U.V. stabilized or stable to weather, Transparent

**Features**

Light Guiding

**Applications**

IT / Business Machine, Electrical and Electronical

**Regional Availability**

North America, Europe, Asia Pacific