



# SABIC® PMMA P150E

POLYMETHYL METHACRYLATE

## DESCRIPTION

SABIC® PMMA P150E is a Optical extrusion grade for sheets for signage, display, sound barrier, and LED light guide panels, as well as for profiles pipes and rods.

## TYPICAL PROPERTY VALUES

Revision 20220619

| PROPERTIES  | TYPICAL VALUES | UNITS             | TEST METHODS |
|---|----------------|-------------------|--------------|
| PHYSICAL PROPERTIES <sup>(1)</sup>                |                |                   |              |
| Specific Gravity                                  | 1.19           | g/cm <sup>3</sup> | ISO 1183     |
| Melt Flow Rate, 230°C/3.8 kg                      | 1.5            | g/10 min          | ISO 1133     |
| Water Absorption (24hr)                           | 0.3            | %                 | ISO 62       |
| Mold Shrinkage                                    | 0.2 - 0.6      | %                 | ISO 294-4    |
| MECHANICAL PROPERTIES <sup>(1)</sup>              |                |                   |              |
| Hardness  |                |                   |              |
| Hardness, Rockwell M                              | 100            | -                 | ISO 2039-2   |
| Tensile Strength                                  | 74             | MPa               | ISO 527      |
| Elongation  | 5              | %                 | ISO 527      |
| Flexural Strength                                 | 120            | MPa               | ISO 178      |
| Flexural Modulus                                  | 3100           | MPa               | ISO 178/1A   |
| Charpy notched impact strength @ 23°C             | 1.4            | kJ/m <sup>2</sup> | ISO 179/1eA  |
| OPTICAL PROPERTIES <sup>(1)</sup>                 |                |                   |              |
| Total Light Transmittance                         | 92             | %                 | ISO 13468    |
| Haze  | <0.5           | %                 | ISO 14782    |
| Refractive Index                                  | 1.49           | -                 | ISO 489      |
| THERMAL PROPERTIES <sup>(1)</sup>                 |                |                   |              |
| Deflection temperature under load DTUL (@1.8 MPa) | 94             | °C                | ISO 75-1&2   |
| Vicat Softening Temperature                       |                |                   |              |
| Vicat Softening Temperature (B50)                 | 104            | °C                | ISO 306      |
| Coeff. of linear thermal expansion                |                |                   |              |
| Coefficient of Linear Expansion                   | 7E-5           | 1/°C              | ISO 11359-2  |
| ELECTRICAL PROPERTIES                             |                |                   |              |
| Surface Resistivity                               | >10E16         | Ω                 | IEC 60093    |
| Volume Resistivity                                | >10E15         | Ω.cm              | IEC 60093    |
| Insulation Resistance                             | >10E15         | Ω                 | IEC 60167    |
| Dielectric Strength                               | 20             | kV/mm             | IEC 60243-1  |
| Dielectric Constant                               |                |                   |              |
| @ 1MHz  | 3.1            | -                 | IEC 60250    |

(1) Typical values; not to be construed as specification limits



## CHARACTERISTICS

SABIC® PMMA P15OE has the following:

- Excellent extrusion processability
- High clarity
- Excellent weather resistance.

## STORAGE AND HANDLING

Handle in an area equipped with local or general ventilation. Provide facilities for washing eyes and body in case of emergency near the handling area. As preventive measure, make sure all equipment and devices are properly grounded. Store at a location away from heat and fire source and an area not exposed to sunlight. Store in an area where no water leakage occurs and the humidity is low.

## PROCESSING CONDITIONS

Extrusion : L/D 30 - 35, barrel 200°C - 245°C, die 235°C - 245°C Injection : pre-drying 80°C - 90°C 4 hours,

Annealing temperature : 75°C - 85°C, 4 hours

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