



# SABIC® POM 280S

POLYOXYMETHYLENE

## DESCRIPTION

SABIC® POM 280S is a very easy flowing grade for injection molding applications requiring with high rigidity and hardness.

## TYPICAL PROPERTY VALUES

Revision 20220619

| PROPERTIES  | TYPICAL VALUES | UNITS                   | TEST METHODS   |
|---|----------------|-------------------------|----------------|
| <b>MECHANICAL PROPERTIES <sup>(1)</sup></b>       |                |                         |                |
| Tensile modulus (1mm/min)                         | 2900           | MPa                     | ISO 527-2 1A   |
| Tensile stress at yield (50mm/min)                | 65             | MPa                     | ISO 527-2 1A   |
| Tensile strain at yield (50mm/min)                | 7.5            | %                       | ISO 527-2 1A   |
| Nominal strain at break (50mm/min)                | 17             | %                       | ISO 527-2 1A   |
| Tensile creep modulus (1h)                        | 2500           | MPa                     | ISO 899-1      |
| Tensile creep modulus (1000h)                     | 1300           | MPa                     | ISO 899-1      |
| Flexural modulus (23°C)                           | 2800           | MPa                     | ISO 178        |
| Charpy impact strength @ 23°C                     | 120            | kJ/m <sup>2</sup>       | ISO 179/1eU    |
| Charpy impact strength @ -30°C                    | 120            | kJ/m <sup>2</sup>       | ISO 179/1eU    |
| Charpy notched impact strength @ 23°C             | 5.5            | kJ/m <sup>2</sup>       | ISO 179/1eA    |
| Charpy notched impact strength @ -30°C            | 5.5            | kJ/m <sup>2</sup>       | ISO 179/1eA    |
| <b>THERMAL PROPERTIES <sup>(1)</sup></b>          |                |                         |                |
| Flammability Rating, UL 94                        |                |                         |                |
| @ 1.5mm and 3mm thickness                         | HB             | Class                   | UL Tested      |
| Melting temperature (10 °C/min)                   | 166            | °C                      | ISO 11357-1/-3 |
| Deflection temperature under load DTUL (@1.8 MPa) | 106            | °C                      | ISO 75-1&2     |
| Coeff.of linear therm. expansion (parallel)       | 1.1            | E-4 /°C                 | ISO 11359-2    |
| <b>PHYSICAL PROPERTIES <sup>(1)</sup></b>         |                |                         |                |
| Density   | 1410           | kg/m <sup>3</sup>       | ISO 1183       |
| Melt volume rate (MVR)                            | 24             | cm <sup>3</sup> /10 min | ISO 1133       |
| Mold shrinkage - parallel                         | 1.9            | %                       | ISO 294-4      |
| Mold shrinkage - normal                           | 1.8            | %                       | ISO 294-4      |
| Water absorption (23°C-sat)                       | 0.65           | %                       | ISO 62         |

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

## CHARACTERISTICS

SABIC® POM 280S has the following:

- High stiffness and hardness.
- Good chemical resistance to solvent.
- High resistance to thermal and oxidative degradation.
- Fuel, strong alkalis as well as good hydrolysis resistance.



## PROCESSING CONDITIONS

### PROCESS GUIDELINES:

#### Injection Molding

Standard injection molding machines with three phase (15 to 25D) plasticizing screws will fit.

Melt Temperature 190 – 230 °C

Mould Temperature 80 – 120 °C

## STORAGE AND HANDLING

Handle in accordance with good industrial hygiene and safety practices. Provide for appropriate exhaust ventilation and dust collection at machinery. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Open containers only in well-ventilated area. Store in a dry and cool area. Keep away from heat sources and sources of ignition. Keep away from direct sunlight. Residual monomer vapors can accumulate in the headspace of closed containers.

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