

SABIC[®] POM 460S

POLYOXYMETHYLENE

DESCRIPTION

SABIC[®] POM 460S is an extremely easy flowing grade suitable for injection molding applications for very thin-walled precision molded parts with critical flow-path-wall thickness relation; the grade permits processing at reduced temperature, shorter cycle times suitable for many parts.

TYPICAL PROPERTY VALUES

Revision 20181012

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
PHYSICAL PROPERTIES ⁽¹⁾			
Density	1410	kg/m ³	ISO 1183
Melt volume rate (MVR)	39	cm ³ /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
MECHANICAL PROPERTIES ⁽¹⁾			
Tensile modulus (1mm/min)	3000	MPa	ISO 527-2 1A
Tensile stress at yield (50mm/min)	65	MPa	ISO 527-2 1A
Tensile strain at yield (50mm/min)	7	%	ISO 527-2 1A
Nominal strain at break (50mm/min)	15	%	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	100	kJ/m ²	ISO 179/1eU
Charpy impact strength @ -30°C	100	kJ/m ²	ISO 179/1eU
Charpy notched impact strength @ 23°C	5.0	kJ/m ²	ISO 179/1eA
Charpy notched impact strength @ -30°C	5.0	kJ/m ²	ISO 179/1eA
THERMAL PROPERTIES ⁽¹⁾			
Flammability Rating, UL 94			
@ 1.5mm and 3mm thickness	HB	Class	UL Tested
Melting temperature (10 °C/min)	166	°C	ISO 11357-1/-3
DTUL (@1.8 MPa)	106	°C	ISO 75-1&2
Coeff.of linear therm. expansion (parallel)	1.1	E-4/°C	ISO 11359-2

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

CHARACTERISTICS

SABIC[®] POM 460S has the following:

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

PROCESSING CONDITIONS

Injection Molding

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

Melt Temperature 190 – 230 oC

Mould Temperature 80 – 120 oC

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 head space of closed containers.

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