Preliminary Datasheet

BASF POM 9

04/2008

POM

Product description

Rapidly solidifying standard grade for injection molding.

Abbreviated designation according to ISO 1043: POM
Designation according to ISO 9988-1: POM-K

Physical form and storage

POM is supplied in the form of granules having a bulk density of approx. 850 g/l. Standard pack is the 25 kg PE bag. POM is not subject to change when it is stored in dry, ventilated rooms. After relatively long storage (>1 year) or when handling material from previously opened containers, preliminary drying is recommended in order to remove any moisture which has been absorbed.

Pruduct safety

POM is not a hazardous material as defined in the German Ordinance on Hazardous Materials.

If POM is processed properly little or no formaldehyde occurs in the region of the processing machine. Measures should be taken to ensure ventilation and venting of the work area, preferably by means of an extraction hood over the barrel unit.

POM decomposes when subjected to excessive heat. The decomposition products formed in this case consist almost exclusively of formaldehyde, a gas which has a pungent smell even at very low concentrations and irritates the mucous membranes. Decomposition can rapidly result in the build-up of a high gas pressure in the barrel of the processing unit. If the die is sealed there may be a sudden release of pressure via the filling hopper.

Contamination of POM by thermoplastics that cause decomposition of polyacetals, e.g. PVC or plastics containing halogenated fire protection agents, must be avoided under all circumstances. Even small quantities can cause uncontrolled and rapid decomposition of POM during processing.

Pellets and finished parts must not be allowed to come into contact with strong acids (especially concentrated hydrochloric acid) since they cause POM to decompose.

Note

BASF SE
67056 Ludwigshafen, Germany

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Preliminary Datasheet [4)]

Typical values for uncoloured product at 23 °C[1)]	Test method [2)]	Unit	Values[3)]
Properties			
Polymer abbreviation	-	-	**POM**
Density	ISO 1183	kg/m³	**1400**
Processing			
Processing: Injection moulding (M), Extrusion (E), Blow moulding (B)	-	-	**M**
Melting temperature, DSC	ISO 11357-1/-3	°C	**167**
Melt volume-flow rate MVR	ISO 1133	cm³/10min	**7.5**
Temperature	ISO 1133	°C	**190**
Load	ISO 1133	kg	**2.16**
Melt temperature, injection moulding	-	°C	**190 - 230**
Mould temperature, Injection moulding	-	°C	**60 - 100**
Mechanical properties			
Tensile modulus	ISO 527-1/-2	MPa	**2400**
Yield stress, 50 mm/min	ISO 527-1/-2	MPa	**63**
Yield strain, 50 mm/min	ISO 527-1/-2	%	**12**
Nominal strain at break, 50 mm/min	ISO 527-1/-2	%	**27**
Charpy unnotched impact strength (23°C)	ISO 179/1eU	kJ/m²	**210**
Charpy notched impact strength (23°C)	ISO 179/1eA	kJ/m²	**6**

Footnotes
1) If product name or properties don't state otherwise.
2) Specimens according to CAMPUS.
3) The asterisk symbol '*' signifies inapplicable properties.
4) The typical values of preliminary datasheets are not statistically firm.

BASF SE

67056 Ludwigshafen, Germany