

Product Information **Polystyrol**

486 M

01/2009

PS-I

 **BASF**
The Chemical Company

Product description

Polystyrol 486 M is a normal flowing, high-impact grade that is especially suitable for blends with a high proportion of general-purpose Polystyrol (preferably Polystyrol 165 H or Polystyrol 158 K for better heat resistance). Suitable for all kinds of thermoformed packagings.

Processing

Polystyrol 486 M can be injection moulded at temperatures between 180 and 260°C, and recommended mould temperatures between 10-60°C. Extrusion temperatures should not exceed 240°C.

Applications

Thermoformed food packagings, eg.dairy - and vending cups, ice cream-containers, food service disposables.

Physical form and storage

Polystyrol 486 M should be kept in its original containers in cool, dry place. Avoid direct exposure to sunlight. Polystyrol 486 M can be stored in silos.

Food legislation

If used unmodified and under appropriate processing conditions parts from Polystyrol 486 M comply with the usual requirements for food packaging. Detailed written confirmations (e.g. BGVO, FDA) are given on request. Please contact our regional sales office.

Product safety

During processing of Polystyrol 486 M small quantities of styrene monomer may be released into the atmosphere. At styrene vapour concentrations below 20 ppm no negative effects on health are expected. In our experience, the concentration of styrene does not exceed 1 ppm in well ventilated workplaces - that is where five to eight air changes per hour are made.

Further information can be found in our Polystyrol safety data sheets. These can be downloaded from the Plastics Portal, www.plasticsportal.net.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed. In order to check the availability of products please contact us or our sales agency.

Typical values for uncoloured product at 23 °C ¹⁾	Test method ²⁾	Unit	Values ³⁾
Mechanical Properties			
Yield strain, 50 mm/min	ISO 527-1/-2	%	1.5
Yield stress, 50 mm/min	ISO 527-1/-2	MPa	24
Tensile modulus	ISO 527-1/-2	MPa	1800
Nominal strain at break, 50 mm/min	ISO 527-1/-2	%	35
Shear modulus	ISO 6721-2	MPa	750
Charpy impact strength (23°C)	ISO 179/1eU	kJ/m ²	N
Charpy impact strength (-30°C)	ISO 179/1eU	kJ/m ²	160
Charpy notched impact strength (23°C)	ISO 179/1eA	kJ/m ²	12
Ball indentation hardness at 358 N/30 s	ISO 2039-1	MPa	66
Thermal properties			
Vicat softening temperature VST/B/50	ISO 306	°C	87
Vicat softening temperature VST/A/50	ISO 306	°C	96
HDT A (1.80 MPa)	ISO 75-1/-2	°C	74
HDT B (0.45 MPa)	ISO 75-1/-2	°C	83
Processing			
Melt volume-flow rate MVR 200 °C/5 kg	ISO 1133	cm ³ /10min	4
Processing: Injection moulding (M), Extrusion (E), Blow moulding (B)	-	-	M.E
Melt temperature, injection molding	-	°C	180 - 260
Mold temperature, injection molding	-	°C	10 - 60
Melt temperature, plates	-	°C	200 - 230
Melt temperature, flat film	-	°C	200 - 240
Electrical properties			
Relative permittivity (100Hz)	IEC 60250	-	2.5
Relative permittivity (1 MHz)	IEC 60250	-	2.5
Volume resistivity	IEC 60093	Ohm*m	>1E16
Surface resistivity	IEC 60093	Ohm	>1E13
Electric strength K20/P50	IEC 60243-1	kV/mm	155
Optical properties			
Surface gloss	-	Skalenteile	34
Other properties			
Density	ISO 1183	kg/m ³	1028
Water absorption, equilibrium in water at 23°C	similar to ISO 62	%	<0.1
Moisture absorption, equilibrium 23°C/50% r.h.	similar to ISO 62	%	<0.1

Footnotes

1) If product name or properties don't state otherwise.

2) Specimens according to CAMPUS.

3) The asterisk symbol "*" signifies inapplicable properties.