



Polystyrene - HIPS HIGH-IMPACT RESISTANT



## Product information

**General properties:** HIPS high-impact resistant is high impact polystyrene with improved heat resistance and good flow properties.

### Physical properties (typical values)

Property	Value	Unit	Standard	Method
Volume melt-flow rate MVR	4.8	cm <sup>3</sup> /10 min	ISO 1133	200 °C/5 kg
Vicat softening temp. VST	89	°C	ISO 306	B50/ÖI
Charpy impact strenght at 23 °C	10	kJ/m <sup>2</sup>	ISO 179	1eA
Yield stress	26	MPa	ISO 527-2	50 mm/min
Tensile stress at break	1.8	%	ISO 527-2	50 mm/min
Flexural strength	25	MPa	ISO 527-2	50 mm/min
Nominal strain at break	50	%	ISO 527-2	50 mm/min
Tensile modulus	1800	MPa	ISO 527-2	1 mm/min
Flexural strength	42	MPa	ISO 178	2 mm/min
Ball indentation hardness H	80	N/mm <sup>2</sup>	ISO 2039-1	358 N/30 s
Density	1040	kg/m <sup>3</sup>	ISO 1183	
Water absorption (after 24 h)	<0.1	%	ISO 62	
Temp. of deflection under load HDT/A	82	°C	ISO 75-2	1,8 MPa
Thermal conductivity	0.16	W/m·K	DIN 52 612	
Mean therm. Coefficient of linear expansion	0,8·10 <sup>-4</sup>	K <sup>-1</sup>	DIN 53 752	(23 - 80)°C
Processing shrinkage	0.5-0.7	%	ISO 294-4	
Flammability at 1.4mm and more	94HB	Class	UL-Standard 94	Horiz.burning test





## **Processing**

HIPS high-impact resistant can be processed by all conventional techniques using standard conditions for Impact polystyrene although it is developed primarily for sheet and foil extrusion. Cups and containers made From HIPS high-impact resistant show a very uniform wall thickness distribution.

## **Examples of application**

Vending cups, dairy packaging and disposable tableware toys, profiles for furniture and picture frames.

## **Regulatory Compliance**

On request, we will be happy to provide you with Regulatory Compliance Statements (RCSs) that affirm our products' conformity to various EU Directives, including food contact. Standard RCSs are available for Directives on RoHS (Return of Hazardous Substances), WEEE (Waste Electrical and Electronic Equipment), Packaging Waste et al. We can also provide Declarations confirming the absence of heavy metals and a range of other substances subject to restrictions under EU Marketing and Use Directives, or prohibited under national laws and Company Standards. Please contact us for up-to-date regulatory information on any of our products.

## **Food Contact Compliance Statement**

Please be informed that HIPS high-impact resistant complies with the following positive lists/approvals for food-contact materials and articles:

### **EU (European Union):**

Directive 2002/72/EC as amended, Annex II (monomers), Section A, and Annex III (incomplete list of additives). Manufacturers using the above product for the fabrication of finished products intended to come into contact with food are responsible for compliance by adequate testing or recognized model calculations (eg. MigraPass). They are also required to comply with the general regulatory requirement that these products do not bring about an unacceptable change in the composition of the foodstuffs or deterioration in the organoleptic characteristics thereof.

