

## Product Information

### Empera 251N

General purpose polystyrene

#### General properties

Empera 251N is a general purpose polystyrene grade with high heat resistance and satisfactory flow properties.

#### Physical properties (typical values)

Property	Value	Unit	Standard	Method
Volume melt-flow rate MVR	2.8	cm <sup>3</sup> /10 min	ISO 1133	200 °C/5 kg
Vicat softening temperature VST	101	°C	ISO 306	B50/oil
Charpy impact strength at 23 °C	14	kJ/m <sup>2</sup>	ISO 179	1eU
Tensile stress at break	55	MPa	ISO 527-2	50 mm/min
Nominal strain at break	3	%	ISO 527-2	50 mm/min
Tensile modulus	3300	MPa	ISO 527-2	1 mm/min
Flexural strength	100	MPa	ISO 178	2 mm/min
Ball indentation hardness H	150	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	90	°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	0.4-0.6	%	ISO 294-4	

#### Processing

Empera 251N can be processed by all methods normally used for polystyrene. It is suitable for the extrusion of sheets and foamed films using a direct gas injection method, and also for the injection moulding of articles with a high heat resistance.

#### Examples of application

Beakers for hot drinks, film and tape reels, lamp covers, thermoformed packaging (blended with high impact Empera), and sheets for shower cubicle partitions, ceiling panels.

#### Supply form

Empera 251N can be supplied in two versions, without or with an external additive for improving pneumatic conveying. "L" as a suffix to the grade designation is characterizing the version with this agent, i.e. Empera 251L.

Empera 251N is supplied as cylindrical pellets, packed in 25 kg bags or bulk.

## **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 Empera 251N 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 recognised 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 a deterioration in the organoleptic characteristics thereof.

Release: January 2008

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