

Product Information

Empera 524N

Impact polystyrene

General properties

Empera 524N is impact polystyrene with good flow properties.

Physical properties (typical values)

Property	Value	Unit	Standard	Method
Volume melt-flow rate MVR	10.5	cm ³ /10 min	ISO 1133: 1997	200 °C/5 kg
Vicat softening temperature VST	86	°C	ISO 306: 1994	B50/oil
Charpy notched impact strength at 23°C	8	kJ/m ²	ISO 179: 1993	1eA
Yield stress	26	MPa	ISO 527-2: 1993	50 mm/min
Tensile strain at yield	1.2	%	ISO 527-2: 1993	50 mm/min
Tensile stress at break	23	MPa	ISO 527-2: 1993	50 mm/min
Nominal strain at break	50	%	ISO 527-2: 1993	50 mm/min
Tensile modulus	2100	MPa	ISO 527-2: 1993	1 mm/min
Flexural strength	40	MPa	ISO 178: 1993	2 mm/min
Ball indentation hardness H	100	N/mm ²	ISO 2039-1: 1993	358 N/30 s
Density	1040	kg/m ³	ISO 1183: 1987	
Water absorption (after 24 h)	< 0.1	%	ISO 62: 1999	
Temp. of deflection under load HDT/A	80	°C	ISO 75-2: 1993	1.8 MPa
Thermal conductivity	0.16	W/m·K	DIN 52 612	
Mean therm. coefficient of linear expansion	0.8·10⁻⁴	K ⁻¹	DIN 53 752	(23 - 80)°C
Processing shrinkage	0.5-0.7	%	ISO 294-4: 1997	
Flammability class at 1.4mm thickness and more	94HB	Class	UL-Standard 94	Horizontal burning test

Processing

Empera 524N can be processed by all conventional techniques using standard conditions for impact polystyrene. Injection molded articles show well balanced properties in terms of impact, rigidity and surface gloss.

Examples of application

Closures, cups, canisters, dairy packaging, storage boxes, curtain rails, bobbins, refrigerator interiors, front frames for TV sets.

Supply form

Empera 524N 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 524N 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.

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