Product Information

Jun. 2006

Polystyrol 466F

BASF
The Chemical Company

Product description

Polystyrol 466F is normal flow, very high impact polystyrene with a good heat resistance and a high stiffness. It can be used for both injection molding and extrusion molding application.

Processing

Polystyrol 466F can be injection molded under different conditions depending on machinery available and articles molded. Melt temperature should not exceed 280^{o}C.

Applications

Consumer electronics: TV-front and back; chassis for VCR and CD player.
Household : internal parts of vacuum cleaners; air conditioner; drawers
Audio and video, telephone ; printer housings, keyboards, computers, copier parts.
Bobbin sleeve

Form supplied and storage

Polystyrol 466F is supplied as cylindrical shaped granules and is supplied as 2 types according to external lubrication, GR 2 (no external lubrication) and GR 21 (external lubrication). It has to be kept in its original containers in a dry, cool place. Avoid direct exposure to sunlight. Polystyrol 466F can also be stored in silos.

Food legislation

If used unmodified and under appropriated processing conditions Polystyrol 466F conforms with FDA Title 21 CFR Section 177.1640 regarding the use of polystyrene in food contact articles.

Product safety

During processing of Polystyrol 466F small quantities of styrene monomer may be released into the atmosphere. At styrene vapor 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.

Note

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Typical Properties	Test method ISO	Test method ASTM	Unit	Value ISO	Value ASTM
Mechanical properties					
Tensile stress at yield / at break*	527	D 638	MPa	31	32
Strain at yield	527	D 638	%	1.5	
Strain at break	527	D 638	%	40	40
Young's modulus	527	D 638	MPa	2200	2200
Flexural strength	178	D 790-1	MPa	45	45
Flexural modulus	178	D 790-1	MPa	2300	2200
Shear modulus	6721-2		MPa		
Charpy impact strength 23°C / -30°C	179/1eU		KJ/m^2	NB/110	
Charpy notched impact strength 23°C / -30°C	179/1eA		KJ/m^2	10	
Izod notched impact strength 23°C	180/1A	D 256-A	Kg cm/cm		12
Izod notched impact strength -30°C	180/1A	D 256-A	Kg cm/cm		
Ball indentation hardness H132/30,H 358/30*	2039-1		MPa	74	
Rockwell hardness, L scale	2039-2	D785	-		70
Thermal properties					
Vicat softening temperature VST/B/50	306		°C	95	
Vicat softening temperature VST/A/50	306	D1525	°C	103	103
Temp. of deflection under load 1.8 MPa/HDT A	75		°C	90	
DTUL 0.45 MPa/HDT B	75		°C	94	
Processing					
Melt volume rate MVR 200/5	1133		ml/10 min	4	
Melt temperature range			°C	180-260	
Mold shrinkage			%	0.3-0.6	
Dielectric properties					
Dielectric constant at 100 Hz – 1MHz	IEC 250			2.50	
Volume resistivity	IEC 93		Ω cm	>10E16	
Surface resistivity	IEC 93		Ω	>10E13	
Dielectric strength	IEC 243/1		KV/mm	155	
Optical properties					
Specular gloss (smooth surface; DIN 67530)			%	45	
UV color fastness (D E) acc. To IBM 7.17	-	-	-		
Flammability					
UL 94 (1.6 mm)			Class	94HB	
UL 94 (3.2 mm)			Class	94HB	
IEC 65 (2.4 mm)	IEC 65		+ / -	+	
IEC 695-2-1 (1.0 mm)	IEC 695-2-1		°C		
Miscellaneous properties					
Density	1183		g/cm^3	1.05	
Water absorption	62		%	< 0.1	
Moisture absorption (23°C/50% r.h.)	-	-	%	< 0.1	

***NB : no break

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