

309ES-NP (HIPS)

Description:

Speciality High Impact Polystyrene with Environmental Stress Crack Resistance for Refrigerator Liners

Application:

Refrigerator Liners, Containers for Yoghurt, food and dairy packaging

Properties	Test Method	Test Condition	Unit	Typical Value
Physical				
Specific Gravity	ASTM D 792	-	-	1.03
Shrinkage	ASTM D 955	-	%	0.4-0.8
Rheological				
Melt Flow Index	ASTM D 1238 (G)	200 °C / 5 kg	gms / 10min	3.0
Thermal & Optical				
Vicat Softening point	ASTM D 1525	120 °C / Hr, 1 kg	°C	98
Heat Deflection temperature	ASTM D 648	1.82 Mpa	°C	82
Flammability	UL 94	3.2 mm	Rating	HB
Mechanical				
Tensile Strength @ Yield, 3.2 mm	ASTM D 638	50 mm / min	Kg / cm ²	230
Tensile Elongation @ Break, 3.2 mm	ASTM D 638	50 mm / min	%	75
Flexural Strength, 3.2 mm	ASTM D 790	1.3 mm / min	Kg / cm ²	340
Flexural Modulus, 3.2 mm	ASTM D 790	1.3 mm / min	Kg / cm ²	18000
Izod Impact Strength (Notched), 6.4 mm	ASTM D 256	-	Kg.cm / cm	10.0
ESCR Properties				
A) Elongation % retention <input type="checkbox"/> Cyclopentane B) FS % retention in <input type="checkbox"/> Cotton Seed Oil + Oleic Acid (1:1) <input type="checkbox"/> Heptane <input type="checkbox"/> Vinyl gasket <input type="checkbox"/> Iso propanol (IPA) <input type="checkbox"/> Butter	-	-	%	PASS
Processing Conditions				
Melt Temperature	-	-	°C	180 - 220
Die Temperature	-	-	°C	200 - 210
Pre-drying temperature	-	-	-	Not Required

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Processing guidelines:

- It can be extruded under different conditions depending upon the size of machine, and sheet dimensions and application.
- Pre-drying normally not required.

Recommended temperatures:

- Melt Temperature profile: 180-220 °C
- Die Temperature: 200 - 210°C (Optimization of condition gives the best results)

Extrusion at very low & very high temperature profile than required may cause degradation due to shear & Heat

Packing:

Supplied as cylindrical shaped granules in 25 kg PP laminated woven sack bags.

Storage & Handling precautions:

LGPI recommends the storage of Polystyrene in dust free environment, dry & cool place in a shade and avoid direct exposure to sunlight

Product Safety:

Processing may release fumes, which may be irritating. Sufficient ventilation should be provided in the processing area. If it causes eye discomfort, use a full-face respirator.

Handling & fabrication of plastic resin may result in the generation of dust. Dust resulting from sawing, filing & sanding of plastic parts in post molding operations may cause irritation to eyes. In dusty atmospheres, use an approved dust respirator.

Note:

- The above Typical values in this Product data sheet are intended to serve for material selection purpose only
- Values given should not be interpreted as specification and not be used for part or tool design.
- All properties, except melt flow rate are measured on injection molded specimens and after 48 hours storage at 23°C, 50% relative humidity.
- The design and Characteristics of the product manufactured out of LGPI material are beyond our control & expertise, therefore, LGPI shall not own the responsibility for any consequential damage incurred by the Purchaser.