Polystyrene 945E

Technical Data Sheet
Polystyrene - Impact
Produced in the United States

TotalEnergies Petrochemicals & Refining USA, Inc.
Polymers Americas

Description

Polystyrene 945E: Is a super high impact polystyrene designed for applications requiring extra toughness without sacrificing mechanical properties, excellent falling dart impact which, combined with the high gloss, make it a candidate for some ABS applications. This polymer is superior for co-extrusion of high gloss sheet. 945E has unique capabilities for deep draw thermoforming with good sidewall distribution.

Application:

- Custom sheet extrusion
- Deep draw thermoforming
- ABS replacement
- Super high gloss high impact applications

General Information:

- This material complies with FDA requirements as described in 21 CFR §177.1640.
- This material holds Underwriters Laboratory recognition 94HB; see UL File E55470 at www.UL.com.
- USP Class VI
- Material Safety Data Sheets are available to help customers satisfy their safety needs.

Characteristics

	Method	Unit	Typical Value
Rheological Properties			
Melt Flow (200°C-5kg)	D-1238	g/10mn	3.5
Mechanical Properties			
Falling Dart	D-3029	in-lb	160
Izod - notched	D-256	ft-lbs/in	3.2
Tensile Strength	D-638	psi	3,500
Tensile Modulus	D-638	psi (10^5)	3.0
Elongation	D-638	%	55
Flexural Strength	D-790	psi	6,300
Flexural Modulus	D-790	psi (10^5)	3.1
Thermal Properties			
Heat Distortion - Annealed	D-648	°F	196
Vicat Softening	D-1525	°F	208
Other Physical Properties			
Gloss	D-523	60°	90
Density		g/cm^3	1.04
Linear Shrinkage	D-955	in/in	.004 - .007
Moisture		%	<0.1

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