

## 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](http://www.UL.com).
- USP Class VI
- Material Safety Data Sheets are available to help customers satisfy their safety needs.

## Characteristics

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

945E 11/2013

Polystyrene


 TOTAL PETROCHEMICALS & REFINING USA, INC.  
 POLYMERS AMERICAS  
[www.totalrefiningchemicals.com](http://www.totalrefiningchemicals.com)  
 1201 Louisiana Street  
 Suite 1800  
 Houston, TX 77002

 TECHNICAL CENTER  
 P.O. Box 1200  
 Deer Park, Texas 77536  
 Phone: 281-884-7500

1-800-344-3462

All tests were run under laboratory conditions. ASTM (where applicable) testing procedures. The data are intended as a general guide only and do not necessarily represent results that may be obtained elsewhere. The use of TOTAL products must be guided by the users own methods for selection of proper formulation. TOTAL PETROCHEMICALS & REFINING USA, INC. disclaims any responsibility for misuse or miss application of its products. TOTAL MAKES NO WARRANTY OF MERCHANTABILITY AND THERE IS NO WARRANTY THAT GOODS SUPPLIED SHALL BE FIT FOR ANY PARTICULAR PURPOSE. TOTAL'S liability and customer's exclusive remedy for any claims arising out of sales of its products are expressed and limited at customer option to replacement of non-performing goods or payment not to exceed the purchase price plus transportation charges thereon in respect to any material which damage is claimed.

