

Tuesday, February 05, 2008

**STYRON™470**  
**Dow Plastics - Polystyrene, High Impact**

Unit System:

**Actions**

[Legend \(Open\)](#)



**General Information**

**Product Description**

STYRON\* 470 is a high-impact polystyrene with well balanced physical properties, such as good processability and practical toughness. It complies with the U.S. FDA requirements. Typical applications are toys, small appliances, food containers, audio and media enclosures.

**General**

Material Status	<ul style="list-style-type: none"> <li>Commercial: Active</li> </ul>
Availability	<ul style="list-style-type: none"> <li>Asia Pacific</li> </ul>
Test Standards Available	<ul style="list-style-type: none"> <li>ASTM</li> </ul>
Agency Ratings	<ul style="list-style-type: none"> <li>FDA 21 CFR 177.1640 <sup>1</sup></li> <li>UL 94</li> </ul>
Forms	<ul style="list-style-type: none"> <li>Pellets</li> </ul>
Processing Method	<ul style="list-style-type: none"> <li>Extrusion</li> <li>Injection Molding</li> </ul>

**ASTM and ISO Properties <sup>2</sup>**

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04		ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	3.0 g/10 min		ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			ASTM D638
(Compression Molded)	270000	psi	
(Injection Molded)	305000	psi	
Tensile Strength			ASTM D638
(Yield, Compression Molded)	2900	psi	
(Yield, Injection Molded)	3480	psi	
Tensile Strength, Ultimate			ASTM D638
(Compression Molded)	2760	psi	
(Injection Molded)	3340	psi	
Tensile Elongation			ASTM D638
(Break, Compression Molded)	40	%	
(Break, Injection Molded)	50	%	
Impact	Nominal Value	Unit	Test Method

Notched Izod Impact		ASTM D256
(73 °F, Compression Molded)	1.61 ft·lb/in	
(73 °F, Injection Molded)	1.70 ft·lb/in	
<b>Hardness</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Rockwell Hardness (L-Scale)	62	ASTM D785
<b>Thermal</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load (264 psi, Annealed)	194 °F	ASTM D648
Vicat Softening Point	212 °F	ASTM D1525
<b>Flammability</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Flame Rating - UL (0.0579 in)	HB	UL 94

### Notes

<sup>1</sup> When used unmodified for the manufacture of food contact articles, STYRON 470 will comply with Food Additive Regulations FDA 21 CFR 177.1640 under the U.S. Food, Drug and Cosmetic Act. Such uses are subject to good manufacturing practices and any other limitations which are part of the statute or regulations. These should be consulted for complete details.

<sup>2</sup> Typical properties: these are not to be construed as specifications.



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