



# Americas Styrenics MC3650

Americas Styrenics LLC - General Purpose Polystyrene

Tuesday, November 5, 2019

## General Information

### General

Material Status	<ul style="list-style-type: none"> <li>Commercial: Active</li> </ul>		
Availability	<ul style="list-style-type: none"> <li>North America</li> </ul>		
Additive	<ul style="list-style-type: none"> <li>Mold Release</li> </ul>		
Features	<ul style="list-style-type: none"> <li>Crystal</li> <li>Fast Molding Cycle</li> </ul>	<ul style="list-style-type: none"> <li>Food Contact Acceptable</li> <li>High Clarity</li> </ul>	
Uses	<ul style="list-style-type: none"> <li>Containers</li> <li>Cups</li> </ul>	<ul style="list-style-type: none"> <li>Disposable Tableware</li> <li>Household Goods</li> </ul>	<ul style="list-style-type: none"> <li>Vials</li> </ul>
Agency Ratings	<ul style="list-style-type: none"> <li>FDA 21 CFR 177.1640</li> </ul>	<ul style="list-style-type: none"> <li>USP Class VI</li> </ul>	
UL File Number	<ul style="list-style-type: none"> <li>E326906</li> </ul>		
Appearance	<ul style="list-style-type: none"> <li>Clear - Blue Tint</li> </ul>		
Forms	<ul style="list-style-type: none"> <li>Pellets</li> </ul>		
Processing Method	<ul style="list-style-type: none"> <li>Extrusion</li> </ul>	<ul style="list-style-type: none"> <li>Injection Molding</li> </ul>	

## ASTM & ISO Properties<sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.04		ASTM D792
Melt Mass-Flow Rate (200°C/5.0 kg)	13	g/10 min	ASTM D1238
Molding Shrinkage - Flow	4.0E-3 to 8.0E-3	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (Injection Molded)	460000	psi	ASTM D638
Tensile Strength (Injection Molded)	6530	psi	ASTM D638
Tensile Strength (Break, Injection Molded)	6530	psi	ASTM D638
Tensile Elongation (Break, Injection Molded)	3.0	%	ASTM D638
Flexural Modulus (Injection Molded)	480000	psi	ASTM D790
Flexural Strength (Injection Molded)	7980	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F, Injection Molded)	0.39	ft·lb/in	ASTM D256
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (L-Scale)	107		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	189	°F	ASTM D648
Deflection Temperature Under Load 264 psi, Unannealed	178	°F	ASTM D648
Vicat Softening Temperature	208	°F	ASTM D1525
CLTE - Flow	5.0E-5	in/in/°F	ASTM D696
Flammability	Nominal Value	Unit	Test Method
Flame Rating	HB		UL 94

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### Processing Information

	Nominal	Value	Unit
<b>Injection</b>			
Rear Temperature	425 to 480	°F	
Middle Temperature	425 to 480	°F	
Front Temperature	390 to 415	°F	
Nozzle Temperature	415 to 470	°F	
Mold Temperature	60 to 150	°F	
Injection Rate	Fast		
Back Pressure	25.0 to 175	psi	
Cushion	0.250	in	
<b>Extrusion</b>			
Cylinder Zone 1 Temp.	350 to 380	°F	
Cylinder Zone 2 Temp.	360 to 400	°F	
Cylinder Zone 3 Temp.	370 to 410	°F	
Cylinder Zone 4 Temp.	390 to 420	°F	
Cylinder Zone 5 Temp.	400 to 430	°F	
Adapter Temperature	380 to 450	°F	
Melt Temperature	380 to 450	°F	
Die Temperature	390 to 450	°F	
Back Pressure	1500 to 3000	psi	

### Extrusion Notes

Zone #6: 400 to 430°F

Polish Rolls: 150 to 220°F

Compression Ratio: 4:1

Extruder Die: 110 - 150% of the required sheet thickness

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.