



# Americas Styrenics EA3130

Americas Styrenics LLC - General Purpose Polystyrene

Tuesday, November 5, 2019

## General Information

### General

Material Status	• Commercial: Active		
Availability	• Latin America	• North America	
Features	• Additive Free	• Food Contact Acceptable	
Uses	• Color Concentrates	• Medical Devices	• Profiles
Agency Ratings	• FDA 21 CFR 177.1640		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

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

	Nominal Value	Unit	Test Method
Physical			
Density / Specific Gravity	1.04		ASTM D792
Melt Mass-Flow Rate (200°C/5.0 kg)	4.8	g/10 min	ASTM D1238
Molding Shrinkage - Flow (24 hr)	4.0E-3 to 8.0E-3	in/in	ASTM D955
Mechanical			
Tensile Modulus	450000	psi	ASTM D638
Tensile Strength (Yield)	7250	psi	ASTM D638
Tensile Elongation (Yield)	3.0	%	ASTM D638
Flexural Modulus	470000	psi	ASTM D790
Flexural Strength (Yield)	9570	psi	ASTM D790
Tensile Rupture	7252	psi	ASTM D638
Impact			
Notched Izod Impact (73°F)	0.39	ft·lb/in	ASTM D256
Hardness			
Rockwell Hardness (L-Scale)	107		ASTM D785
Thermal			
Deflection Temperature Under Load (66 psi, Unannealed)	207	°F	ASTM D648
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed, 0.250 in	190	°F	
Vicat Softening Temperature	225	°F	ASTM D1525
CLTE - Flow	5.0E-5	in/in/°F	ASTM D696

## Processing Information

	Nominal Value	Unit
Injection		
Rear Temperature	424 to 480	°F
Middle Temperature	424 to 480	°F
Front Temperature	390 to 415	°F
Nozzle Temperature	415 to 469	°F
Back Pressure	29.0 to 174	psi

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Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	351 to 379	°F
Cylinder Zone 2 Temp.	360 to 399	°F
Cylinder Zone 3 Temp.	370 to 410	°F
Cylinder Zone 4 Temp.	390 to 421	°F
Cylinder Zone 5 Temp.	399 to 430	°F
Adapter Temperature	379 to 450	°F
Melt Temperature	379 to 450	°F
Die Temperature	390 to 450	°F

### Extrusion Notes

Polish Rolls: 66 to 104 °C

Head Pressure: 10 to 21 Mpa

### Notes

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