

Resin Composition

70% Polystyrene/30% Polyethylene

Particle Diameter

98% between 0.8 – 1.7 mm

Color

Natural (white)

Shape

Spherical

Average VOC Content

10.5 wt%

Safety

Provide adequate exhaust ventilation during resin and pre-puff storage and processing as recommended in the Safety Guide for ARCEL[®] resin to avoid the hazardous accumulation of the pentane blowing agent.

Raw Bead Storage

Store unexpanded product below 4°C (40°F) until processed to avoid loss of expandability and potential hazardous accumulation of pentane vapor.

Expansion

ARCEL[®] 730 resin can be continuously or batch expanded using conventional EPS expansion equipment. Some minor material handling modifications may be required. For molded part densities below 24 g/L (1.5 pcf), double-pass

will be required to attain desired bulk densities. ARCEL[®] 730 resin has been expanded in continuous expanders ranging in size from 210 to 1,135 liters (55 to 300 gallons) as well as several sizes of batch expanders. Minimum ideal density potential is expected to be:

Nominal Aged Density Expectation	Density, g/L (pcf)
Continuous - Single Pass	22.4 (1.40)
Continuous - Double Pass	16.8 (1.05)
Batch - Single Pass	21.6 (1.35)

Freshly expanded ARCEL[®] 730 resin is sensitive to the thermal/mechanical shock of an airveyor. Improper conveyance may significantly increase density.

Molding

ARCEL[®] 730 is relatively easy to mold. Expanded particles have an indefinite shelf life. Conventional EPS fill guns can be used with a diameter of 15 mm (1.40 pcf) and 18 mm (1.05 pcf). Successful fill is always contingent upon part/tooling design, fill gun placement as well as mold geometry. Minimum recommended wall thickness is 13 mm, again depending on design complexity and fill gun placement.



Refer to the ARCEL[®] 730 Tooling and Part Design Guide for more detailed information.



ARCEL[®] 730 – Foam Physical Properties

Property	Test Method	Units	ARCEL [®] 730				
Density	ASTM-D3575	pcf	1.25	1.50	1.75	2.00	2.50
Compressive Strength at 10% Deformation	ASTM-D3575	psi	13.0	16.6	20.1	23.6	30.7
Compressive Strength at 25% Deformation	ASTM-D3575	psi	16.3	20.4	24.5	28.7	36.9
Tensile Strength at Break	ASTM-D3575	psi	40.7	49.6	58.5	67.3	85.0
Tensile Elongation at Break	ASTM-D3575	%	23.0	22.6	22.2	21.9	21.1
Compression Set	ASTM-D3575	%	42.2	43.0	43.7	44.5	46.1
Tear Strength at Max Load	ASTM-D3575	lb _f /in	8.3	10.0	11.7	13.4	16.8
Puncture Resistance	ASTM-D3763	ft-lb	8.0	9.5	11.0	12.5	15.5
Flexural Strain at Break	ASTM-C203	%	25.0	23.4	21.7	20.1	16.8
Flexural Stress at 5% Strain	ASTM-C203	psi	24.5	32.9	41.4	49.8	66.6

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