

NOVA Chemicals Arcel 730 70% PS/30% PE Interpolymer

Category : Polymer , Thermoplastic , Polyethylene (PE) , Polystyrene (PS) , Expanded Polystyrene (EPS)

Material Notes:

ARCEL is a high-performance, moldable foam resin consisting of 70% polystyrene (PS) and 30% polyethylene (PE). ARCEL provides toughness, flexibility and durability in a lightweight foam. The strength and flexibility of ARCEL creates a resilient resin able to be molded into numerous complex and intricate forms. Its lightweight construction is resistant to puncture, flaking, tearing and breaking. In addition, packaging molded with ARCEL provides good cushioning and easy handling, while its lightweight properties help lower freight and other packaging costs. ARCEL 730 is available in low-pentane (LV) grades for customers with strict pentane emission laws or high-density applications. ARCEL 730 can be continuously or batch expanded using conventional EPS expansion equipment. Some minor material handling modifications may be required. For molded part densities below 1.5 pcf (24 g/l), double-pass expansion will be required to attain even lower bulk densities. ARCEL 730 has been expanded in continuous expanders ranging in size from 55 to 300 gallons as well as several sizes of batch expanders. Information provided by NOVA Chemicals.

Order this product through the following link:

http://www.lookpolymers.com/polymer_NOVA-Chemicals-Arcel-730-70-PS30-PE-Interpolymer.php

Physical Properties	Metric	English	Comments
Density	0.0168 g/cc	0.000607 lb/in ³	Expected from double pass expansion
	0.0210 g/cc	0.000759 lb/in ³	Expected from batch expansion
	0.0216 g/cc	0.000780 lb/in ³	Expected from single pass expansion
Particle Size	800 - 1700 µm	800 - 1700 µm	98% range

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	0.331 MPa	48.0 psi	1.5 pcf density
	0.517 MPa	75.0 psi	2 pcf density
	0.689 MPa	100 psi	2.4 pcf density
Compressive Strength	0.137 MPa	19.8 psi	25% Deformation; 1.5 pcf density
	0.193 MPa	28.0 psi	25% Deformation; 2.0 pcf density
	0.255 MPa	37.0 psi	25% Deformation; 2.5 pcf density
Tear Strength	1.05 kN/m	6.00 pli	1.2 pcf density
	1.67 kN/m	9.50 pli	1.4 pcf density
	2.28 kN/m	13.0 pli	1.6 pcf density
	2.72 kN/m	15.5 pli	2.0 pcf density
	3.33 kN/m	19.0 pli	2.5 pcf density

Mechanical Properties Toughness	Metric 14.5 J	English 10.7 ft-lb	Comments 1.2 pcf density
	16.5 J	12.2 ft-lb	1.4 pcf density
	18.5 J	13.6 ft-lb	1.6 pcf density

Thermal Properties	Metric	English	Comments
Thermal Conductivity	0.0376 W/m-K	0.261 BTU-in/hr-ft ² -°F	0.032 g/cc density
	0.0381 W/m-K	0.264 BTU-in/hr-ft ² -°F	0.028 g/cc density
	0.0388 W/m-K	0.269 BTU-in/hr-ft ² -°F	0.024 g/cc density
	0.0395 W/m-K	0.274 BTU-in/hr-ft ² -°F	0.020 g/cc density
Insulation R Value	3.66	3.66	1.3 pcf density
	3.74	3.74	1.6 pcf density
	3.79	3.79	1.8 pcf density
	3.83	3.83	2.0 pcf density
Flame Spread	1.2 mm/min	0.047 in/min	5.0 pcf density
	1.6 mm/min	0.063 in/min	4.0 pcf density
	2.6 mm/min	0.10 in/min	2.5 pcf density
	4.5 mm/min	0.18 in/min	at 1.5 pcf density

Descriptive Properties	Value	Comments
Average VOC Content	10.5%	(A low volatile grade is also available)
Color	White	
Particle Shape	Spherical	
Storage	Below 40°F (4°C)	

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