

R185C

Styropek Expandable POLYSTYRENE RESINS

PRODUCT DATA SHEET

January 2024



Packaging/Fabricated Packaging

Features/Attributes:

- Reduced Prepuff Age Times
- Fast Molding Cycles

Applications:

- Packaging
- Fabricated Packing
- Shippers / Coolers

Properties	Typical Values (English Units)	Typical Values (S.I. Units)
Product Properties:		
Pentane Content	5.6% by weight	5.6% by weight
“C” Bead Size (average in/mm)	0.023 inches	0.58 millimeter
Bulk Density	38 – 40 pounds per cubic foot	608 – 640 grams per liter
Maximum Continuous Service Temperature	175° F	80° C

Bead Size Description:

	Cumulative US Standard Sieve
“C” Small	98% through 20 on 45

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www.styropek.com

AVAILABILITY

STYROPEK® expandable polystyrene (EPS) resins are produced at the Monaca, PA plant site and are available in 2205 pound (1 metric tonne) bulk bags. The product type and batch number are clearly marked on each bag. Contact the STYROPEK sales office in your region.

QUALITY AND ENVIRONMENTAL MANAGEMENT SYSTEMS

R185C resins are manufactured at an ISO 9001 and ISO 14001 registered facility.

STORAGE AND HANDLING

R185C resins should be stored in a cool, dry place away from direct sunlight. This product can release pentane during expansion and molding. Pentane is a highly flammable gas in the presence of open flames, lit cigarettes, sparks, static electricity discharges, or heat. Prolonged or improper storage can result in deterioration of product properties. Care should be taken when handling and transferring product to prevent foreign matter contamination. The STYROPEK' **Safety Data Sheet (SDS) and EPS Storage and Handling Safety Guide** contain important safety information and should be reviewed before using the product.

PROCESSING CONDITIONS

Recommended Conditions:

Minimum Density:

Batch pre-expander:

- 1.10 pounds per cubic foot or 17.5 grams per liter.

Continuous pre-expander:

- 1.60 pounds per cubic foot or 22.5 grams per liter.

Pre-puff age time:

4 - 36 hours – depending on pre-expanded density and method of bead pre-expansion.

Comprehensive assistance with processing conditions and Technical Services are available from STYROPEK Styrenics Technology Center.

ENVIRONMENTAL INFORMATION

STYROPEK® EPS resins are biologically and chemically inert. STYROPEK® EPS resins does not contain CFC's (Chlorofluorocarbons).



STYROPEK EPS resins are recyclable where expanded polystyrene products are accepted. Visit epsindustry.org to find an EPS collection program near you.



6 PS is the SPI resin code for polystyrene to identify material type for sorting and recycling. Significant information regarding EPS recycling is available from the [EPS Industry Alliance](http://epsindustry.org).

Where recycling of EPS resins is not possible, disposal to landfill or incineration in accordance with applicable laws and regulations is recommended. Contact STYROPEK Styrenics Technology Center for further information on recycling and disposal.

STYROPEK® is a proud member of EPS Industry Alliance. For additional EPS information please visit: <http://epsindustry.org/>

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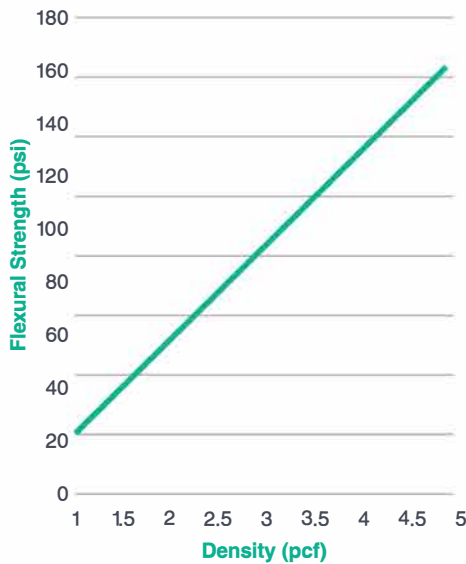
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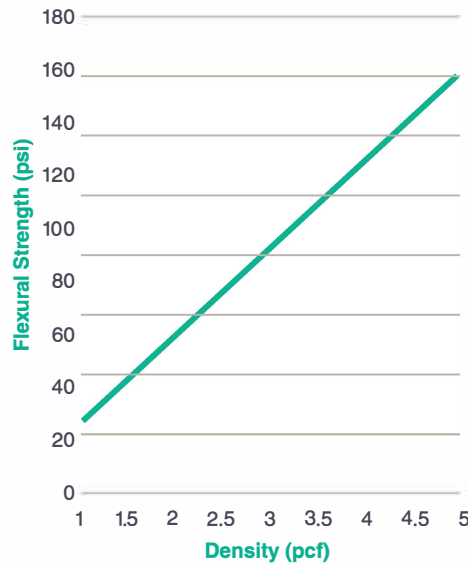
R185C

TYPICAL MECHANICAL PROPERTIES:

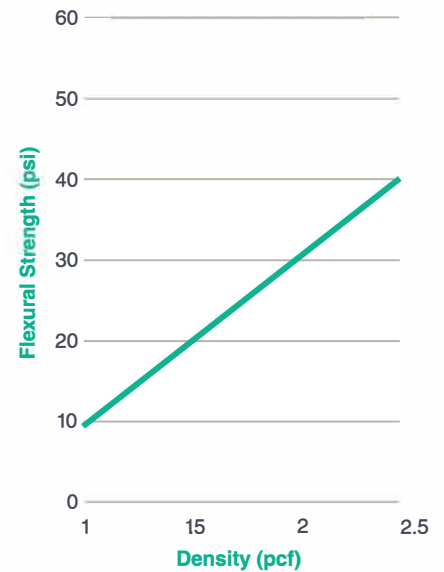
Flexural Strengths — ASTM C-203



Tensile Strength — MIL-P-19644



Compressive Strength at 10% Deformation — ASTM D-1621



Flexural Strength - Pounds per square inch (psi) and Density – Pounds per Cubic Foot (pcf).

Thermal Conductivity, k, vs Density Mean Temperature 75°F (24°C) ASTM — C-518

	Density (pcf)				
	10	125	15	2.0	2.5
Units					
Btu in./hr-ft ² -°F	.255	.244	.242	.239	.235

Water Vapor Permeability ASTM C-355

Nominal Density		Perm-In.		Perm-Cm.	
		Plaques	Blocks	Plaques	Blocks
pcf	Fusion				
1.0	Optimum	1.0-2.0	1.5-3.0	1.5-3.5	2.0-5.0
1.4	Optimum	0.5-2.0	1.5-3.0	1.5-3.0	2.0-5.0
2.2	Optimum	0.5-1.5	1.0-2.5	1.0-2.5	2.0-4.0
2.5	Optimum	0.5-1.5	1.0-2.5	1.0-2.5	1.5-4.0
1.0	Minimum	1.5-3.0	2.0-3.5	2.5-5.0	2.5-6.0
2.3	Minimum	1.0-2.0	1.5-3.0	1.5-3.5	2.5-5.0

Water Absorption MIL-P-19644

Lbs of Water Absorbed per sq. ft. of Specimen Surface.				Kg of Water Absorbed per sq. meter of Specimen Surface		
Nominal Density						
pcf	kg/m ³	Actual	Specification Max	Actual	Specification Max	% By Volume
1.0	16	0.05	0.12	0.24	-	2.8
1.5	24	0.04	-	0.20	-	2.3
2.0	32	0.04	0.12	0.20	0.59	2.3
2.5	40	0.04	-	0.20	-	2.3
3.0	48	0.04	0.12	0.20	0.59	2.3
5.0	80	0.03	0.10	0.15	0.49	1.7

The product properties in the data sheet have been determined in accordance with the current testing methods of the American Society for Testing and Materials (ASTM), wherever possible.

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