



Flint Hills Resources Expandable Polystyrene Grade 71

I. GENERAL DESCRIPTION

Grade 71 expandable polystyrene is a regular grade specifically formulated to produce high strength containers for demanding applications such as produce packaging. It is available with a low blowing agent (VOC) content to provide competitive cycle times and minimum VOC emissions. Products molded from Grade 71 expandable polystyrene meet the requirements of the Food and Drug Administration for packaging of foods in direct contact with the package.

II. PROPERTIES OF GRADE 71 EXPANDABLE POLYSTYRENE

Type	Bead Size	Typical* Unexpanded Particle Size, (mm)	Blowing Agent Level	Recommended Density Range** (lbs./ft ³)	Method of Processing
5371	B/A	0.600 – 1.600	LOW	1.5 – 3.0	SHAPE
7371	C	0.400 – 0.700	LOW	1.5 – 3.0	SHAPE

*Typical indicates at least 90% of product falls within the given particle size range

**Low density on low pentane products attainable with double pass or batch pre-expansion.

III. APPLICATIONS

Grade 71 expandable polystyrene is a special purpose regular grade product designed for maximum mechanical strength and crush resistance in produce containers such as grape boxes, where containers must support stacking of multiple pallets. Grade 71 is designed for processing at densities of 2.0 pcf and higher, although depending upon processing equipment many facilities have successfully obtained densities as low as 1.5 pcf on a consistent basis. Density adjustment of the product is carried out by controlling the length of time the beads remain in the expander and/or the pressure/temperature in the pre-expander. Either double-pass or batch expansion can be used to expand to lower densities, taking advantage of Grade 71's high strength and low VOC emissions.

III. APPLICATIONS cont.

To help assure that Flint Hills Resources products are not misapplied, or used in any manner which may not have been intended or tested, we suggest a review of proposed applications with Flint Hills Resources personnel to assist in dealing with end use, regulatory and safety issues. Your Flint Hills Resources Sales Representative can arrange for the proper contact with our Technical Staff for such review.

IV. SHIPPING AND HANDLING PRECAUTIONS

Expandable polystyrene contains a flammable blowing agent and is consequently regulated by the United States Department of Transportation as a CLASS 9-MISCELLANEOUS MATERIAL. These products are shipped in regulation UN 2211, 2204 - pound flexible bulk packages. Each container is lined with a hydrocarbon barrier liner to decrease the emissions of volatiles. **Reference For further information, please refer to Technical Bulletin TEC-I-002, "Recommended Safety, Health and Environmental Guidelines" and to the Flint Hills Resources Material Safety Data Sheet for product code "Grade 71" name "Expandable Polystyrene (EPS),"** a copy of which is provided with the first shipment or upon request. Printed, Fax or Electronic File copies of individual SDS may be requested by contacting our Customer Service representatives, Mon – Fri 8:00 AM to 5:00 PM EST, at 1-800-972-1010 or by going to our website, www.fhr.com.

V. EXPANDABLE POLYSTYRENE MANUFACTURING LOCATIONS

Peru, Illinois

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