



Flint Hills Resources Expandable Polystyrene Grade 54

I. GENERAL DESCRIPTION

Grade 54 expandable polystyrene is a modified grade used for general block and shape molding operations. It is available in a wide variety of bead sizes and blowing agent (VOC) content. This product contains a flame retardant and the molded expanded polystyrene has been tested and classified by Underwriters Laboratories, Inc. for ASTM E 84 and UL-94 properties and by Underwriters Laboratories of Canada for CAN/ULC - S102.2-M88 properties. Within the parameters of the reported test data, expanded polystyrene manufactured from Flint Hills Resources Modified Grade 54 expandable polystyrene complies with the building codes of the United States and Canada, as well as many industrial, military, and federal specifications.

II. PROPERTIES OF GRADE 54 EXPANDABLE POLYSTYRENE

Type	Bead Size	Typical* Unexpanded Particle Size, (mm)	Blowing Agent Level	Recommended Density Range** (lbs./ft ³)	ASTM C-578 Type	Method of Processing
3654	A	1.100 – 1.700	STANDARD	0.90 – 1.25	I, VIII	BLOCK
5654	B	0.700 – 1.400	STANDARD	0.90 – 1.25	I, VIII	BLOCK
7654	C	0.400 – 0.800	STANDARD	0.90 – 1.50	I, VIII, II	SHAPE & BLOCK
3454	A	1.100 – 1.700	LOW	0.90 – 1.25	I, VIII	BLOCK
5454/ S5454	B	0.700 – 1.400	LOW	0.90 – 1.50/ 1.15 – 2.50	I, VIII, II / VIII, II, IX	BLOCK/ SHAPE
S7454	C	0.400 – 0.800	LOW	1.35 – 2.50	II, IX	SHAPE
3354	A	1.100 – 1.700	ULTRA LOW	0.90 – 1.50	I, VIII, II	BLOCK
5354	B	0.700 – 1.400	ULTRA LOW	0.90 – 2.00	I, VIII, II, IX	BLOCK & SHAPE
7354/ S7354	C	0.400 – 0.800	ULTRA LOW	1.15 – 2.00/ 1.35 – 2.50	VIII, II, IX/ II, IX	BLOCK/ 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 54 modified expandable polystyrene has gained wide acceptance worldwide in the production of consistent high quality molded products. This product exhibits a fast cycling processing characteristic while producing good fusion. 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 safety considerations. Your Flint Hills Resources Sales Representative can arrange for the proper contact with our Technical Staff for such review.

IV. EXPANDABLE POLYSTYRENE MANUFACTURING LOCATIONS

Peru, Illinois

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