

ICC-ES Evaluation Report

ESR-1095

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**DIVISION: 07 00 00—THERMAL AND MOISTURE
PROTECTION****Section: 07 21 00—Thermal Insulation****REPORT HOLDER:****SH ENERGY & CHEMICAL CO., LTD.
25, SOROYNG-DONG, KUNSAN-CITY
CHONLABUK-DO
KOREA
82-063-469-1546****EVALUATION SUBJECT:****ANYPOL EXPANDABLE POLYSTYRENE BEADS, SE
GRADE****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)
- 1997 *Uniform Building Code*™ (UBC)
- 1999 *Standard Building Code*® (SBC)
- BOCA® *National Building Code*/1999 (BNBC)

Properties evaluated:

- Surface-burning characteristics
- Physical properties

2.0 USES

The Anypol expandable polystyrene beads, SE Grade, are used by independent manufacturers to produce expanded polystyrene (EPS) insulation boards.

3.0 DESCRIPTION

Anypol expandable polystyrene SE grade beads are designated as SE 1600, SE 2000, SE 2500, and SE 3000, and are used by independent manufacturers to produce expanded polystyrene (EPS) insulation boards. Boards manufactured with the Anypol beads are produced solely through the introduction of heat, without other additives. This process expands the beads, which are then molded into insulation boards in nominal densities and maximum thicknesses greater than those specified in Table 1. The end use of the polystyrene beads, including the manufacture of boards, is beyond the scope of this report. At densities and thicknesses no greater than those specified in Table 1, insulation boards produced from the Anypol beads have a flame-spread rating of 25 or less and a smoke-developed rating not exceeding 450 when tested in accordance with the ASTM E 84.

Anypol expandable polystyrene SE grade beads have been qualified in accordance with Section 4.5.15.1.1 of the ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12).

The expandable beads can be used to produce expanded polystyrene products that comply with ASTM C 578-06, for the types specified in Table 1, provided the final product is recognized in a current ICC-ES evaluation report and has been qualified in accordance with Section 4.5.15.1.2 of AC12.

4.0 INSTALLATION

Installation is as noted in the corresponding ICC-ES evaluation reports on foam plastic assemblies, or as otherwise permitted in applicable codes noted in Section 1.0 of this report.

5.0 CONDITIONS OF USE

The Anypol SE Grade Expandable Polystyrene Beads described in this report comply with those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** The maximum density and thickness of the insulated boards produced from expanded beads are noted in Table 1 of this report.
- 5.2** Products manufactured from the polystyrene beads described in this report must be recognized in a current ICC-ES evaluation report.
- 5.3** Insulation boards produced from Anypol SE grade beads must be separated from the building interior by a thermal barrier complying with IBC Section 2603.4, IRC Section R314.4, UBC Section 2602.4, SBC Section 2603.5, and BNBC Section 2603.4, as applicable.
- 5.4** The beads are produced by SH Energy & Chemical Co., Ltd., in Kunsan City, Korea, under a quality control program with inspections by Underwriters Laboratories Inc. (AA-668).

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Foam Plastic Insulation (AC12), dated June 2009.

7.0 IDENTIFICATION

Containers of Anypol beads bear a label noting the component designation; the name and address of SH Energy & Chemical Co., Ltd.; the evaluation report number (ESR-1095); the lot number; and the name or logo of the inspection agency, Underwriters Laboratories, Inc.

TABLE 1—MAXIMUM INSULATION BOARD DENSITY AND THICKNESS

TYPE ¹	MAXIMUM DENSITY (pcf)	MAXIMUM THICKNESS (inches)
I	1.00	6
VIII	1.25	5
II	1.50	5
IX	2.00	6

For **SI**: 1 pcf = 16.018 kg/m³, 1 inch = 25.4 mm.

¹Type is as designated in ASTM C 578-01