

# ICC-ES Evaluation Report


**ESR-3857**

Reissued October 2024

Subject to renewal October 2025

ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.

Copyright © 2024 ICC Evaluation Service, LLC. All rights reserved.

<p><b>DIVISION: 07 00 00 — THERMAL AND MOISTURE PROTECTION</b></p> <p><b>Section: 07 21 00 — Thermal Insulation</b></p>	<p><b>REPORT HOLDER: SUNPOR KUNSTSTOFF GmbH</b></p>	<p><b>EVALUATION SUBJECT: LAMBAPOR® 750 / LAMBAPOR® 753 / LAMBAPOR® 753 PREMIUM / LAMBAPOR® MICRO EXPANDABLE POLYSTYRENE BEADS</b></p>	
---	---	--	---

## 1.0 EVALUATION SCOPE

**Compliance with the following codes:**

- 2015, 2012, 2009 and 2006 [International Building Code® \(IBC\)](#)
- 2015, 2012, 2009 and 2006 [International Residential Code® \(IRC\)](#)

**Property evaluated:**

- Surface-burning characteristics
- Physical properties

## 2.0 USES

Lambdapor® 750 / Lambdapor® 753/ Lambdapor® 753 Premium / Lambdapor® Micro expandable polystyrene beads are used by independent manufacturers to produce expanded polystyrene (EPS) insulation boards.

## 3.0 DESCRIPTION

The EPS insulation products manufactured with the Lambdapor® 750 / Lambdapor® 753 / Lambdapor® 753 Premium / Lambdapor® Micro expandable polystyrene beads are produced solely through the introduction of heat, without other additives. This process expands the beads, which are then molded into EPS boards with the minimum densities and maximum thicknesses specified in [Table 1](#) of this report. The end use of the polystyrene beads, including the manufacture of products, is outside the scope of this report and must be addressed in a separate evaluation report. Boards manufactured from Lambdapor® 750 / Lambdapor® 753 Lambdapor® 753 Premium / Lambdapor® Micro expandable polystyrene beads in the minimum densities and maximum thicknesses noted in [Table 1](#) have a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 (UL 723).

Lambdapor® 750 / Lambdapor® 753 / Lambdapor® 753 Premium / Lambdapor® Micro expandable polystyrene 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 EPS products that comply with Types I, II, VIII and IX [0.90, 1.35, 1.15 and 1.80 pcf (15, 22, 18 and 29 kg/m<sup>3</sup>)] minimum densities, respectively] of ASTM C578, 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 DESIGN AND INSTALLATION

Installation must be as noted in the corresponding ICC-ES evaluation report on the EPS insulation product, or as otherwise permitted by the code official under IBC Section 2603 or 2015, 2012 and 2009 IRC Section R316 (2006 IRC Section R314), as applicable.

## 5.0 CONDITIONS OF USE:

The Lambdapor<sup>®</sup> 750 / Lambdapor<sup>®</sup> 753 / Lambdapor<sup>®</sup> 753 Premium / Lambdapor<sup>®</sup> Micro expandable polystyrene beads described in this report comply with, or are a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The density and thickness of the insulation boards produced from the expandable polystyrene beads must be as noted in [Table 1](#) of this report.
- 5.2 Products manufactured from the beads must be recognized in a current ICC-ES evaluation report.
- 5.3 The EPS insulation products manufactured from the expandable polystyrene beads must be separated from the building interior by an approved thermal barrier complying with IBC Section 2603.4 or 2015, 2012 and 2009 IRC Section R316.4 (2006 IRC Section R314.4), as applicable.
- 5.4 The beads are produced by Sunpor Kunststoff GesmbH in St. Poelten, Lower Austria, under a quality-control program with inspections by ICC-ES.

## 6.0 EVIDENCE SUBMITTED

Data in accordance with the [ICC-ES Acceptance Criteria for Foam Plastic Insulation \(AC12\)](#), dated June 2015, editorially revised October 2017.

## 7.0 IDENTIFICATION

- 7.1 Each container of beads must bear a label with the Sunpor Kunststoff GesmbH name and address; the bead identification; the evaluation report number (ESR-3857).
- 7.2 The report holder's contact information is the following:

**SUNPOR KUNSTSTOFF GmbH**  
**TIROLER STRASSE 14, PF 414**  
**ST. POLTEN, LOWER AUSTRIA, 3105**  
**+43 2742 291 0**  
[www.sunpor.at](http://www.sunpor.at)  
[office@sunpor.at](mailto:office@sunpor.at)

TABLE 1—INSULATION BOARD DENSITY AND THICKNESS

ASTM C578 TYPES	MIN. DENSITY (pcf)	MAX. THICKNESS (inches)
I	0.90	4
VIII	1.15	4
II	1.35	4
IX	1.80	4

For SI: 1pcf = 16.02 kg/m<sup>3</sup>, 1 inch = 25.4 mm.