

# ICC-ES Evaluation Report

**ESR-2487**

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This report is subject to re-examination in two years.

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**DIVISION: 08 00 00—OPENINGS**  
**Section: 08 87 16—Safety Films**
**REPORT HOLDER:**
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**EVALUATION SUBJECT:**
**LLUMAR SCL SR PS4 SAFETY FILM**
**1.0 EVALUATION SCOPE**
**Compliance with the following codes:**

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)

**Properties evaluated:**

- Safety glazing
- Light-transmitting plastic

**2.0 USES**

LLumar SCL SR PS4 Safety Film is jobsite-applied, by manufacturer-approved installers, to the vertical interior surface of exterior glazing or either vertical side of interior glazing of annealed glass substrates, to create an organic-coated safety glazing material. The resulting organic-coated safety glazing complies with CPSC 16 CFR, Part 1201, as required by IBC Section 2406 and IRC Section 308.3. The coated glazing also meets requirements for light-transmitting plastic in accordance with IBC Section 2606.

**3.0 DESCRIPTION**

LLumar SCL SR PS4 Safety Film is a single-layer 0.004-inch-thick (0.10 mm), transparent polyester film that has an acrylic coating applied to one face of the film and a pressure-sensitive acrylate adhesive applied to the other face. The adhesive coating is protected by a silicone-coated polyester liner that is removed prior to installation. See Table 1 for the applicable CPSC 16 CFR Part 1201 area limitation classifications.

**4.0 DESIGN AND INSTALLATION**
**4.1 General:**

Installation of SCL SR PS4 Safety Film must comply with this report, IBC Section 2608 and the film manufacturer's published installation instructions. The film manufacturer's

published installation instructions must be available at the jobsite at all times during installation. This report is limited to film application on annealed glass in like new condition. Like-new condition glass, for the purpose of this evaluation, is without cracks, scratches or any other imperfections. Glass condition is subject to approval by the special inspector prior to film application.

**4.2 Substrate:**

The film is field-applied to the interior surface of exterior glazing or to either side of interior glazing surfaces of 1/8- and 1/4-inch-thick (3.2 and 6.4 mm) annealed glass.

**4.3 Preparation:**

The film must be applied when the surface temperature of the glazing is above 40°F (4°C). All windows, doors and ventilation outlets must be closed to maintain a draft-free space. Glazing surfaces must be cleaned and prepared in accordance with the film manufacturer's published installation instructions.

The entire surface must be cleaned with the film manufacturer's approved cleaning solution, scraped with the film manufacturer's recommended scraper or razor blade and scoured with a nylon pad using the same cleaning solution. One final pass over the entire surface with the same cleaning solution, followed by use of the film manufacturer's recommended squeegee, is required.

**4.4 Film Placement:**

The film is initially cut to overlap glazing edges by 1/2 inch (12 mm) on all sides. The protective liner is removed from the adhesive side of the film. The adhesive side of the film and the glazing surface are saturated with the film manufacturer's recommended application solution from a pressurized spray tank. The adhesive side of the film is applied to the glazing. The film's outer surface is sprayed with application solution and squeegeed to within 2 inches (50.8 mm) of the edge of the film.

The edges of film are trimmed to expose a maximum of 1/8 inch (3.2 mm) of the edge of glazing.

The film is relubricated with application solution and squeegeed through to the film edges to remove all excess water. The glazing edges are dried with a lint-free, absorbing towel—wrapped, hard-card squeegeed, with a bumping action at the film's edge. The identifying mark set forth in Section 7.0 must be applied to the glazing by the film applicator.

The safety film must be applied in a continuous, uninterrupted sheet over the entire glass substrate surface with 100 percent adhesion to the glass, with no splices.

**4.5 Special Inspections:**

Inspectors for special inspections must be provided by the permit applicant for SCL SR PS4 safety film being installed as part of a safety glazing assembly. The special inspector, at a minimum, must monitor the installation of the film by manufacturer-approved installers; verify the existing glass condition prior to film application in accordance with this report; verify the cleaning and preparation of the existing glass prior to application; verify the product being installed (i.e., checking the product labeling and condition of the film prior to installation), verify final labeling of the coated glass in accordance with Section 7.0; and verify that the film is installed in accordance with the manufacturer’s published installation instructions, and the installation requirements of this report. The special inspector must provide the code official with a written report detailing all inspection procedures, observations of the film installation and any discrepancies noted.

**4.6 Curing and Cleaning:**

Thirty days must be allowed for the assembly to dry thoroughly before the glazing can be washed. Cleaning must be done with non-abrasive common window cleaning solutions only. Only synthetic sponges, squeegees or soft cloths are permitted to be used with the cleaning solution.

**5.0 CONDITIONS OF USE**

The SCL SR PS4 Safety Film described in this report complies with, or is 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 Installation must comply with this report, the manufacturer’s published instructions and the applicable code. In the event of a conflict between the manufacturer’s published installation instructions and this report, this report governs.
- 5.2 Installation of the film must be by manufacturer-approved installers.
- 5.3 Use of the product is limited to interior surfaces of vertical glazing.
- 5.4 This report is limited to single glazed applications only.
- 5.5 Special inspections must be conducted in accordance with Section 4.5 of this report.

5.6 SCL SR PS4 Safety Film installed as part of a safety glazing assembly must be limited to the CPSC 16 CFR, Part 1201, classifications and applications as set forth in Table 1 of this report.

5.7 Written verification that the condition of the existing glass is within the manufacturer’s published guidelines and in accordance with this report, prior to application of film, is required. Verification must be submitted as part of the special inspection report to the code official.

**6.0 EVIDENCE SUBMITTED**

- 6.1 Manufacturer’s descriptive literature and installation instruction.
- 6.2 Quality control documentation.
- 6.3 Report containing results of testing performed in accordance with ASTM E 84. Report containing results of testing performed in accordance with
- 6.4 ASTM D 1929. Report containing results of testing performed in accordance with CPSC 16 CFR, Part 1201.
- 6.5 Report containing results of testing performed in accordance with ASTM D 635.

**7.0 IDENTIFICATION**

Containers and packages of the SCL SR PS4 Safety Film must be identified by a stamp or label bearing the manufacturer’s name (CPFilms), the product name, plastic classification (IBC - Class CC2) and the evaluation report number (ESR-2487).

All applications of SCL SR PS4 Safety Films to glazing, located in specific hazardous areas, must be identified by a label applied by the film installer that bears the name of the film manufacturer (CPFilms), the product designation (LLumar SCL PS4) and the safety glazing standard with which the film-coated glazing complies (CPSC 16 CFR Part 1201). Such identification markings must be of a type that, once applied, cannot be removed without being destroyed.

After the film is applied, the glazing must also be labeled in accordance with Section 2403.1 of the IBC and R308.1 of the IRC.

**TABLE 1**

Glazing Film Type	Glass Substrate Nominal Thickness (inch)	CPSC 16 CFR - Part 1201 Classification <sup>1</sup>
SCL SR PS4	1/8	Category II
	1/4	Category I

For SI: 1 inch = 25.4 mm.

**Notes:**

<sup>1</sup>Category I is limited to applications where a single piece of glazing material is 9 ft<sup>2</sup> (0.8 m<sup>2</sup>) or less in area. Category II is for applications where a single piece of glazing material exceeds 9 ft<sup>2</sup> (0.8 m<sup>2</sup>) in area.