

# Technical Information Sheet



## SunWave™ Smoke Vent

Item Description	Item Number
Smoke Vent	See Table Below

### Description

SunWave Smoke Vents are available in several models and certifications for use in industrial and commercial buildings where emergency smoke evacuation requirements are needed.

- Multiple size available.
- UL Listed smoke vents are available with snow load ratings of 10 and 30 pounds per square foot.
- FM Approved model smoke vents are available in single- and double-glazed versions made with ClearArmour® prismatic polycarbonate with a snow load rating of 10 pounds per square foot.

**Smoke Vents (Polycarbonate)** provide a double glazed, polycarbonate outer lens and a polycarbonate inside lens that is hail rated up to 2" (50.8 mm) (Class 4) in a side-by-side dome configuration. The fusible link activation temperature for this unit is 370 °F (188 °C). This smoke vent provides a snow load rating of 10 or 30 psf, is UL listed, and can be rated FM Approved if requested.

**NOTE:** All units open a minimum of 105° at the specified fusible link activation temperature.

Selection Information
<p><b>Smoke Vent (Polycarbonate)</b></p> <ul style="list-style-type: none"> <li>▪ Rated Design Pressure: 60 psf</li> <li>▪ Upon review of Pre-Installation Notice (PIN), additional wind speed coverage may be available. Contact your regional Building Systems Advisor for more information.</li> </ul>
<p>NOTE:</p> <ul style="list-style-type: none"> <li>▪ It is the responsibility of the designer/building owner to determine the appropriate product(s) to be used for the specific project and related conditions.</li> <li>▪ Improper use of product may void warranty coverage.</li> </ul>

## Method of Application

- Substrates must be clean, dry, smooth, and free of sharp edges, fins, loose or foreign materials, oil, and grease.
- Install in accordance with current specifications, details, and workmanship requirements.
- Fasten the SunWave Prismatic Skylights with the included #12 x 1½" (38.1 mm) 300 series stainless steel screws with neoprene/stainless steel bonded washers.

## Storage

- Store products in manufacturer’s unopened packaging until ready for installation.
- Store materials in a dry area, protected from freezing, staining, contamination or damage.

## Precautions

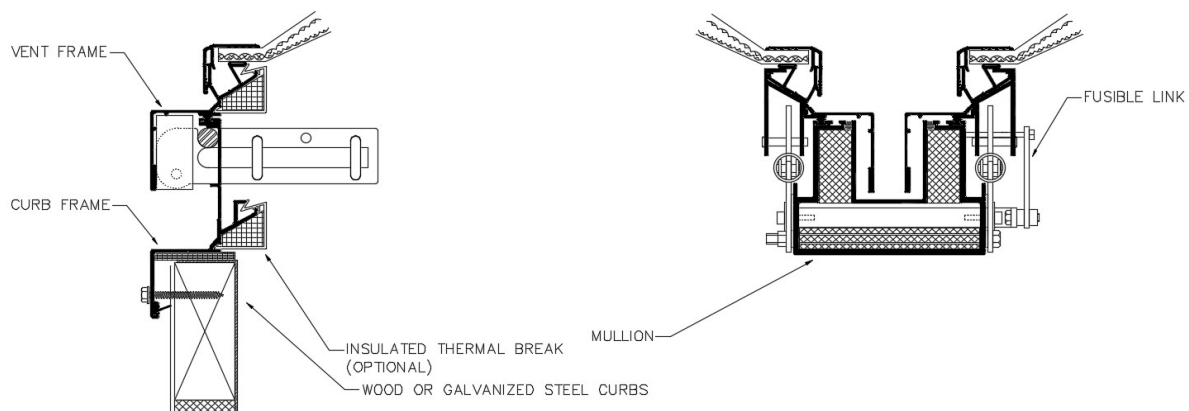
- To provide fall protection, a Safety-Security Guard (SSG) Screen is integrated into all SunWave curbs; see SunWave Roof Curb TIS #1802. Installer shall be responsible for fall protection when SunWave curbs are not used.
- SunWave Smoke Vents not for use in harsh, corrosive, marine and high-humidity environmental conditions such as marina, greenhouses, petrochemical facilities, or other chemicals where Smoke Vents may be exposed to such conditions.
- Smoke Vents should not be installed in locations with operating temperatures in excess of -75 °F (-59 °C) or 180 °F (82 °C).

## Cleaning Skylight

Frequency of cleaning is determined by site conditions. When cleaning lenses, use only water or water with a mild soap. Use a soft rag to minimize scratching the lenses. A pressure washer is acceptable to use as well.

Never use ammonia, aromatic or petroleum-based products to clean lenses. This will cause deterioration and cracking of the lens and will void the warranty.

## Design Specification



- Smoke Vents shall operate by a fusible link with a minimum temperature rating of 165 °F (74 °C). The fusible link mechanism with gas shocks shall include an exterior manual release cable for testing.

## Design Specification Continued

- Smoke Vents shall open to a minimum angle past 90°.
- Skylights shall be fabricated from 6061-T6 aluminum, finish to be natural mill. Frames shall have integral condensation and weeping gutters which drain interior moisture to the outside. Corners shall be mitered and welded. Polycarbonate glazing shall be separated from the skylight frame with a silicon seal.
- Skylight frames shall be glazed using prismatic polycarbonate in a SunWave Prismatic Dome configuration.
- Multi-glazed units default to include Insulated Thermal Break, Curb Seal Tape, Weather Sweep, and screws.
- Single-glazed units default to not include Thermal Break, Curb Seal Tape, Weather Sweep, or screws.

## Compliance Information

**FM #4430** Approved Smoke Vent shall be double glazed using ClearArmour® Clear Prismatic Polycarbonate over ClearArmour® High White Prismatic Polycarbonate lens, glazed in a SunWave Prismatic Series Dome configuration.

**UL Listed** Smoke Vent Lens will have a SunWave Prismatic Dome configuration consisting of ClearArmour® Polycarbonate.

**OSHA Regulation Section 1926.502(i)(2)** applies to skylight covers being placed in the openings in a roof at the time of installation. This regulation states “All [other] covers shall be capable of supporting, without failure, at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time.” An independent third-party testing laboratory performed a 400-pound drop test on the double-glazed prismatic dome lens unit which resulted in no damage after impact and five minutes of continued exposure. Therefore, when properly installed on a building architecturally designed for, and supportive of skylights, SunWave Prismatic Skylights are considered compliant with this OSHA requirement.

**NOTE:** No plastic skylight of any kind is immune to degradation over time and any skylight would be unlikely to continue to meet the OSHA requirements after having been exposed to 10 to 20 years of UV radiation. It is imperative building owners, contractors, designers, and architects comply with OSHA guidelines and install an appropriate guard or screen to prevent injuries to third parties.

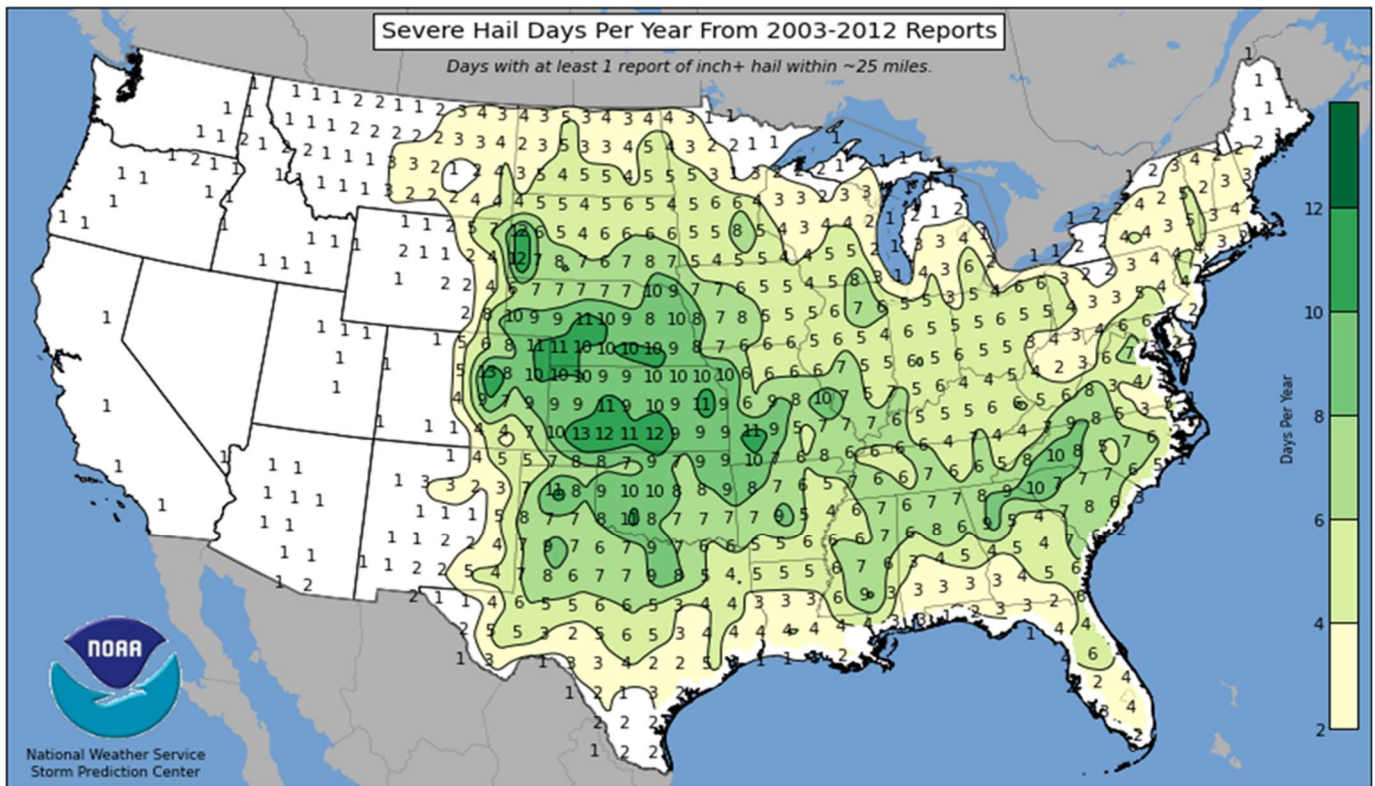
**OSHA Section 1910.29 (e)** establishes the requirements for all skylight roof openings. This regulation states, “Covers. The employer must ensure each cover for a hole in a walking-working surface:” **1910.29(e)(1)** “Is capable of supporting without failure, at least twice the maximum intended load that may be imposed on the cover at any one time; and **1910.29 (e)(2)** Is secured to prevent accidental displacement.” To ensure that our products comply with this OSHA regulation, all SunWave Curbs include standard integrated fall protection screens. These screens come factory-installed in our curbs, ensuring that all our curb installations meet the regulation. Therefore, when properly installed to a building architecturally designed for, and supportive of skylights, SunWave Prismatic Skylights are considered compliant with this OSHA requirement. However, please note that Holcim Building Envelope is not responsible for the installation or architectural designs required for proper use of SunWave products. Use of a certified installer and consultation with an architect before using SunWave products is advised.

## Distribution of Hail Sizes

Range Size (Inches / mm)	Number of Events	Percentage Total	Percentage Cumulative
< 0.75" / 19	316	0.14%	0.14%
0.75 < 1" / 19 < 25.4	110,104	49.50%	49.64%
1" < 2" / 25.4 < 50.8	101,048	45.43%	95.06%
2" < 3" / 50.8 < 76.2	9,185	4.13%	99.19%
3" < 4" / 76.2 < 101.6	841	0.38%	99.57%
4" to 8" / 101.6 to 203.2	952	0.43%	100%

Source: CDS business Mapping, LLC Daniel Munson and Gloria Molina

## Average Severe Hail Days Per Year



### LEED® Information

- Post-Consumer Recycled Content: 50%
- Post Industrial Recycled Content: 25%
- Manufacturing Location: Sacramento, CA
- NOTE: LEED® is a registered trademark of the U.S. Green Building Council**

Typical Properties			
Lens Type - Properties	Single Lens	Double Lens Information	
<b>Smoke Vent (Polycarbonate)</b>			
Dome Material	N/A	Polycarbonate	Polycarbonate
Thickness	N/A	0.165" (4.2 mm)	.165 FM approved: 0.125"(3.2 mm)
Impact Modification (%)	N/A	N/A	N/A
Hail Resistance	N/A	2.0" (50.8 mm)	
Snow Load Rating (psf)	N/A	10lb or 30lb (FM Approved 10lb only)	
Fusible Link	N/A	370 °F (188 °C)	
VLT (Visible Light Transmittance)	N/A	0.64	

UL Rated, Class 1, Acrylic over Acrylic Lenses, Double Glazed			
Item Number	ID Frame Call-Out		
	Model	Width	Length
W56SUNDLC1147	4070	51.25" (1.3 m)	87.25" (2.2 m)
W56SUNDLC1148	4080	51.25" (1.3 m)	100.25" (2.5 m)
W56SUNDLC1156	5060	63.625" (1.62 m)	75.625" (1.92 m)
CUSTOM	5558	67.75" (1.72 m)	70.75" (1.8 m)

**NOTE:** Custom mold fee applies to SunWave Prismatic Domes. Custom Dome will be determined by cur dimensions.

Please contact Holcim Technical Services at 800-428-4511 for further information.

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