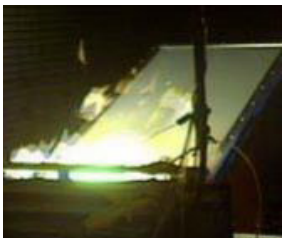
Fire Performance of Translucent Systems

ASTM E-108
Burning Brand Test on
Quadwall® "Class A"



ASTM E-108
Flame Spread Test on
Quadwall® "Class A"

Approved Light Transmitting Plastics Fire Test Performance Meets Building Code Requirements:

Self-Ignition	ASTM 1929-3	1120 °F
Smoke Density of Plastics	ASTM D-2843	47%
Burning Extent	ASTM D-635	CC1 Rating

Interior Flame Spread Classifications:

Interior Flame Spread	ASTM E-84, UL 723	Class A Classification Class A Classification

Quadwall® "Class A, B & C" Roof Assembly and Roof Covering:

Fire-Rated Roof Construction	ASTM E-108	Class A, B & C Listing Available

Pentaglas® is a fire retardant material. When subject to a fire, the material will melt away, forming a venting hole through which smoke, heat, and gases escape. Pentaglas is a non-aggressively burning material with low smoke development, available in CC1 or CC2 classifications.

For additional details about special Quadwall® panel systems that are recognized as Class A, Class B, or Class C Fire-Rated Roof Construction, see the "Fire Rated Systems" section of the Technical Information page on the NFPA website.

28662 N. Ballard Drive
Lake Forest, IL 60045 USA

t: +1 847.816.1060
f: +1 847.816.0425

www.kingspanlightandair.com
www.cpidaylighting.com

Fire Performance of Translucent Systems

What is "Class A" Roof Assembly & Roof Covering?

The requirements for "Class A" Roof construction cover the performance of roof assemblies and roof covering materials when exposed to a fire. These requirements indicate the necessary fire resistance characteristics of roof assemblies and coverings when exposed to a fire originating from sources outside a building on which the covering may be installed.

How is a "Class A" Fire-Rated Panel Viewed by the Building Codes?

Skylights glazed with Light Transmitting Plastics that conform to the requirements of "Class A" fire performance for Roof Assemblies & Roof Coverings may be exempt from limitations otherwise applicable to "Approved Plastics" (Refer to IBC Chapter 26: Sections 2610.1, 1505).

What are the Required Tests to Meet the "Class A" Rating?

Testing of "Class A" material is done under ASTM E-108 (also known as UL 790, FM 4470, and NFPA 256), which consists of three (3) parts:

1. Intermittent Flame Test
2. Spread of Flame Test
3. Burning Brand Test

What are the "Conditions of Acceptance" for a "Class A" Listing?

1. At no time during the Intermittent Flame, Spread of Flame, or Burning Brand Tests shall:
    - Any portion of the roof covering material be blown or fall off the deck in the form of flaming or glowing brands
    - The roof deck be exposed by breaking, sliding, cracking, or warping of the roof covering
    - Portions of the deck fall away in the form of glowing particles
2. For the purpose of the requirements of paragraph 1, any piece of roof covering that continues to glow or flame upon landing on the test room floor is considered to be a glowing or flaming brand, respectively
3. At no time during the "Class A" Intermittent Flame tests or the Burning Brand tests shall there be sustained flaming of the underside of the deck
4. For the Spread of Flame tests, the flaming of the material shall not have spread beyond 6 ft. for "Class A". There shall have been no significant lateral spread of flame from the path directly exposed to the test flame

**For more complete details and information regarding "Class A", "Class B", and "Class C" tests, please refer to the actual ASTM E-108 standard

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LISTING INFORMATION OF

CPI Daylighting Translucent Skylight Systems

SPEC ID: 21233

CPI Daylighting, Inc.
28662 N. Ballard Drive
Lake Forest, IL 60045

CLASS 'A'

Slope: Unlimited (AC-1)

1. "Quadwall®" translucent panel system.

CLASS 'B'

Slope: 4:12 (BC-1)

1. *"Quadwall® 3.0" translucent panel system.

CLASS 'C'

Slope: Unlimited (CC-1)

1. *"Quadwell® Class C Panelize System" translucent panel system.

Slope: Unlimited (CC-2)

1. *"Quadwall® Skin System" translucent panel system.

Evaluated to the following:

The roof covering systems in this section have been evaluated for external fire resistance Classifications A, B, C as outlined by the following test methods:

ASTM-E108 - American Society for Testing & Materials 'Standard Methods of Fire Test of Roof Covering'

FM-4470, Section 5.1.A - Factory Mutual 'Standard Method of Test for Fire Resistance of Roof Covering Materials'

NFPA-256 - National Fire Protection 'Standard Method of Fire Tests of Roof Covering'

UBC-15-2-94 - Uniform Building Code 'Test Standard for Determining the Fire Retardancy of Roof Covering Materials'

CAN/ULC-S107 - Underwriters' Laboratories of Canada 'Standard Method of Tests for Fire Resistance of Roof Covering Materials'

UL-790 - Underwriters' Laboratories Inc. 'Tests for Fire Resistance of Roof Covering Materials'

Each system listing identifies the deck substrate as either non-combustible or combustible. Systems evaluated for combustible decks will provide the same ratings when applied over non-combustible decks.Unless otherwise noted in individual listings, combustible decks shall be sheathed with a minimum 15/32" veneer plywood or minimum 7/16" non-veneer APA rated sheathing panel (oriented strand board panels, structural particleboard panels, composite panels or wafer-board panels) or 3/4" thick solid wood

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www.cpidaylighting.com

sheathing boards. The component materials of each system must be applied in the order in which they are listed. All components of the system must be listed for external fire exposure by an agency acceptable to the AHJ.

Some Roof Covering Systems have been evaluated for other performance characteristics, in addition to external fire exposure. Where applicable, such additional performance characteristics are noted within the specific listing.

In all cases, manufacturer's instructions should be consulted for installation procedures and details not covered by these listings.

Listed Materials are identified by a label or marking bearing the wording, "Listed Roofing Component", a reference number or code and the WHI Certification Mark.

Attribute	Value
Criteria	UL 790 (2004)
Criteria	ASTM E108 (1983)
Criteria	UBC 32-7 (1997)
CSI Code	08 60 00 Roof Windows and Skylights
Intertek Services	Certification
Listed or Inspected	LISTED
Listing Section	ROOF COVERING SYSTEMS
Report Number	WHI-495-R-0702
Roofing: Fire Rating	Class A
Roofing: Fire Rating	Class B
Roofing: Fire Rating	Class C
Roofing: Maximum Slope	4:12
Roofing: Maximum Slope	Unlimited
Spec ID	21233
Test Original Issue Date	March 10, 1992

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Online Access to CPI's "Class A, B, & C" Roof Construction Listings

For online access to listing information regarding Kingspan Light + Air | CPI Daylighting's "Class A, B, or C" Roof Construction products, please connect to the SpecDirect website at
www.spec-direct.com, then click on the "free access" button and search for:

Organization: CPI Daylighting Inc.
Specification: Type - Any Type

Then click on the "search" button at the bottom left.

Once the search is complete, you can use the menu tabs along the bottom of the screen to view CPI's information online or to print the formal listing report for CPI Daylighting.

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