

December 3, 2015

Mr. Ed Davis  
President  
Ceilume (Empire West, Inc.)  
9270 Graton Road  
P.O. Box 511  
Graton, CA 95444

RE: Analysis Concerning the Use of Drop-out Ceiling Tiles and NFPA 13  
Project No.: 1JJB00149.000

Dear Mr. Davis:

This letter constitutes our analysis concerning the use of Ceilume Drop-out ceiling panels with respect to the requirements for drop-out ceilings specified in NFPA 13 “Standard for the Installation of Sprinkler Systems” 2016 Edition.

Empire West, Inc. manufactures several types of ceiling panels that can be installed below ceiling sprinklers and are designed such that they will drop-out in the event of a fire and allow the ceiling sprinklers to activate in a timely manner.

NFPA 13 defines a drop-out ceiling as:

**3.3.9 Drop-Out Ceiling.** A suspended ceiling system, which is installed below the sprinklers, with listed translucent or opaque panels that are heat sensitive and fall from their setting when exposed to heat.

Additional requirements for drop-out ceilings are specified in Section 8.15.15 of NFPA 13 which states:

**8.15.15 Drop-Out Ceilings and Ceiling Materials.**

**8.15.15.1\*** Drop-out ceilings and ceiling materials shall be permitted to be installed beneath sprinklers where the ceiling panels or ceiling materials are listed for that service and are installed in accordance with their listings.

**8.15.15.2** Drop-out ceilings and ceiling materials meeting the criteria in 8.15.15.1 shall not be installed below quick-response or extended coverage sprinklers unless specifically listed for that application.

**8.15.15.3** Drop-out ceilings and ceiling materials meeting the criteria in 8.15.15.1 shall not be considered ceilings within the context of this standard.

**8.15.15.4\*** Piping installed above drop-out ceilings and ceiling materials meeting the criteria in 8.15.15.1 shall not be considered concealed piping.

**8.15.15.5\*** Sprinklers shall not be installed beneath drop-out ceilings or ceiling materials meeting the criteria in 8.15.15.1.

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Section 8.15.15.1 of NFPA 13 allows drop-out ceilings to be installed below sprinklers if the drop-out ceiling materials are listed for that application. The other Sections of 8.15.15 address issues such as limits on use of drop-out ceiling when certain sprinklers are used and other issues with respect to installation.

Ceilume (Empire West, Inc.) manufactures several types of drop-out ceiling tiles. The Ceilume tiles are “listed” for use as drop-out ceiling tiles by both Underwriters Laboratories, Inc. (ULI) and Factory Mutual Approvals. The attached Figure 1 provides a copy of the listing information from ULI and Figure 2 provide a copy of the approvals listing by Factory Mutual Approvals.

These “listings” demonstrate that the Ceilume ceiling tiles meet the requirements of both organizations for use as drop-out ceiling tiles. Therefore, based on these listings, the Ceilume tiles meet both the definition of drop-out ceiling tiles and the requirements of Section 8.15.15.1 of NFPA 13.

In summary, the Ceilume ceiling tiles listed by either ULI and/or FM Approvals meet the requirements of NFPA 13 for use as drop-out ceiling tiles installed below ceiling sprinklers. It should be noted that the limitations of use in Sections 8.15.15.2 through 8.15.15.5 of NFPA 13 as well as any limitations in the listings shall be followed.

Sincerely,

**JENSEN HUGHES**

A handwritten signature in black ink, appearing to read 'J. Beitel', is written over the printed name.

Jesse J. Beitel  
Senior Scientist/Principal



BLME.R4036

## Ceiling Panels for Use Beneath Sprinklers

[See General Information for Ceiling Panels for Use Beneath Sprinklers](#)

**EMPIRE WEST INC, DBA  
EMPIRE WEST PLASTICS**  
9270 GRATON RD  
PO BOX 511  
GRATON, CA 95444 USA

R4036

Molded plastic in the form of translucent panels.

	Type 1 Panel	Type 2 Panel
Flame spread	15-20*	25*
Smoke developed	125*	350*

\*May be used beneath sprinklers, subject to the authorities having jurisdiction.

[Last Updated](#) on 2002-10-07

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Figure 1.

Approval Guide



**Building Insulations - Walls and Ceilings (FM Approval Class Numbers 4411, 4651, 4880, 4881, 4882)**

Insulating materials may occur in building construction to reduce heat or sound transmission through a wall, roof or floor-ceiling assembly. See Roofing Products and Assemblies Category for roof insulations.

The insulation listed below may be a surface treatment exposed to the building occupancy or as core material faced with metal, gypsum wallboard, concrete or masonry.

The listed assemblies are not intended as long-term fire walls or barriers since fire endurance was not evaluated. See SPECIFICATION TESTED PRODUCTS, ASTM E119 Standard, for hourly rated systems.

**Suspended Plastic Ceilings (Class Number 4651)**

Plastic suspended ceilings of translucent or opaque panels are used to conceal ducts, sprinkler piping, lighting fixtures or for decorative purposes. All products are of low combustibility. Because they are designed to be heat sensitive, promptly moving out of their setting, they will not significantly interfere with the operation of automatic sprinklers located above. When other building components and occupancy do not require sprinkler protection, these products may be used without creating such a need.

Restraining clips must not be used to hold the panels in their metal suspension frame. Clips which have been tested and FM Approved may be used for this purpose. Painting or coating the panels is prohibited since this may insulate and therefore hinder the immediate drop-out response to the early stage of a fire. However, panels which have been tested and FM Approved with a factory-applied coating may be used. Suspended plastic ceilings must be installed in accordance with all of the recommendations described in FM Global Loss Prevention Data Sheet 1-12.

The polystyrene ceiling tiles listed in Section B are expanded from the modified grade bead resins produced by the manufacturers listed in Section A. These products have met the fire test requirements of FM Approval Standard No. 4651.

Unless otherwise indicated in the listings, all polystyrene panels are nominal 1.0 lb/ft<sup>3</sup> (16.0 kg/m<sup>3</sup>) density.

**Panels**

**Ceilume Ceiling Tiles & Panels**

Ceilume Ceiling Tiles & Panels. Polyvinyl chloride plastic (PVC/vinyl) panels

**“0.013 inch” Ceiling Tiles. Nominal thickness of .013 inch (0.33 mm)**  
15 mil (0.381 mm) max thickness with optional dust covers.

Min 2x2 ft (0.6x0.6 m) Tile/panels. In white, opaque, all colors & finishes (Better Than Tin & Faux Wood)

Ceilume Tile/Panel Styles Including , but not limited to the following:

**“0.013 inch” Ceiling Tile Styles**

AcostaTherm (dust cover/back panel) , Anza, Apollo, Aristocrat, Astral, Circle Star, Catalina, Contempo, Convex, Dart, Diamond Plate, Domino, Doric, Dots, Electra, Fargo, Florentine, Four Square, Franciscan, Gradient, Grange, Grecian Square, Harlequin, Herman, Ivanhoe, Juniper, Medallion, Memo, Metro, Modulelux, Monterey, Moorish, Neptune, Orange, Orb, Petal, Plaza, Pluto, Polyline, Polysquare, Primitive, Regency, Ripple, Roman Circle, Roman Square, San Anselmo, Saturn, Septaline, Skyens, Southland, Stratford, Teahouse, Victorian, Wedgewood, Westchester, Westminster, Woodward, Zee

<b>Company Name:</b>	Empire West Inc DBA Ceilume the Smart Ceiling Tile
<b>Company Address:</b>	9270 Graton Rd, Box 511, Graton, California 95444, USA
<b>Company Website:</b>	<a href="http://www.empirewest.com">http://www.empirewest.com</a>
<b>New/Updated Product Listing:</b>	Yes
<b>Listing Country:</b>	United States of America
<b>Certification Type:</b>	FM Approved

Figure 2.