

PRODUCT FEATURES

DESCRIPTION

Ceilume ceiling panels and tiles are the solution to many design challenges. They are thermoformed from thin, rigid plastic to provide durability, sustainability and excellent value. We've made them for decades and recently invested in new research, testing, and code approvals so you can use them confidently in architectural and commercial projects.



USES

- **Ceiling Panels:**
For installation in exposed ceiling suspension systems.
- **Ceiling Tiles:**
For direct mounting to substrates.

Panel and tile definitions are based on ASTM E1264.

PRODUCT ATTRIBUTES AND CHARACTERISTICS

- **Design Options:**
Ceilume panels and tiles are offered in more than 40 standard styles with molded relief ranging from historic to contemporary decorative motifs. Many of the styles can be inverted to increase design options. They are available with a choice of standard colors and faux finishes plus translucent and transparent materials. Custom styles and finishes are also available, contact factory before specifying.
- **Fire Safety:**
Ceilume panels and tiles have Class A surface burning characteristics most building occupancies.
- **Drop-Out Installation *Beneath* Fire Sprinklers:**
Ceilume panels are one of the few ceiling products that can be used in a "drop-out" ceiling installed beneath sprinklers. When exposed to heat from a fire, panels soften, sag, and drop out of ceiling grids to expose sprinklers. This feature can reduce the cost of

sprinkler installation, reduce visual clutter from exposed sprinklers, eliminate dust-collecting surfaces beneath ceiling, and help protect sprinkler from damage and tampering.

Some authorities having jurisdiction (AHJ) may be unfamiliar with drop-out panels. Discuss use with AHJ before specifying. Ceilume's technical staff is ready to make presentations to AHJs and to assist you in other ways.

Contact Ceilume or visit our website for copies of:

Drop-Out Ceiling Panels - A Discussion on Their Use with Fire Sprinklers, a white paper by Rolf Jensen & Associates, 2014

"Bench Test: A Check-in on Drop-Out Ceilings", Walls & Ceilings, September 2014

- **Water and Humidity Resistant:**
Ceilume panels and tiles are not damaged by exposure to water or humidity. They can be used in areas subject to moisture including shower rooms, swimming pools, and industrial facilities subject to wash down. They comply with FEMA requirements for flood prone construction. They can also be installed before humidity in building has stabilized.
- **Lighting Versatility:**
White panels and tiles have high reflectivity. Use translucent white for luminous ceilings (see photo) and transparent panels for special effects. Surface relief creates interplay of light and shadow. For uniform lighting, light sources should be at least six inches above backpanels.



• **Hygiene:**

Ceilume products can be used in healthcare facilities, food preparation areas, clean rooms, and where high levels of hygiene are required. They are fiber free, have easy-to-clean surfaces, and do not support mold or mildew growth.



• **Acoustic:**

AcoustoTherm backpanels and Soniguard insulation improve noise reduction of ceilings.

• **Safety and Ease of Handling:**

Ceilume products can be easily installed and removed for maintenance without damage. Our panels and tiles are lightweight and less likely to cause injury due to lifting or dropping. They can be cut with scissors or aviation snips without use of razors or knives. Unlike fibrous ceiling products that are frangible and friable, Ceilume panels and tiles are robust and flexible and do not require installers to wear respirators. And unlike metal ceilings that require installers to wear gloves, long sleeves, and eye protection, Ceilume products do not have sharp edges.

• **Sustainability:**

Ceilume panels and tiles are Greenguard Gold certified for indoor air contribute to many sustainability goals.

SELECTION CRITERIA

With so many patterns, finishes, and installation options, there are nearly a thousand ways to specify Ceilume's products. See our website or call Ceilume for assistance determining which products meet your project's requirements.

SUSTAINABILITY CRITERIA

Ceilume products contribute to the following sustainability goals of USGBC's LEED v4:

Energy and Atmosphere

• **Commissioning and Verification:**

Ceilume panels can be removed to provide access to above-ceiling equipment for commissioning and maintenance.

• **Energy Performance:**

Ceilume's white panels and tiles have high light reflectivity to optimize lighting. Ceilume's Soniguard and AcoustoTherm also provide additional thermal insulation.

Materials and Resources

• **Construction & Demolition Waste Management:**

Ceilume panels and tiles can be installed with minimal scrap or waste. We use Types 1 and 3 plastics that are recyclable in most communities. Packaging - primarily corrugated cardboard - is minimal because products nest compactly.

• **Persistent Bioaccumulative Toxics (PBT):**

Ceilume products contain cadmium, or copper.

• **Building Life-Cycle Impact Reduction / Design for Flexibility:**

Panels can be removed and cleaned for reuse.

• **Environmental Product Declarations / Sourcing of Raw Materials / Material Ingredients:**

Documentation is being prepared, contact factory.



Indoor Environmental Quality

- **Environmental Tobacco Smoke Control:**
Ceilume panels and tiles can be used as part of a compartmentalization strategy. They do not absorb tobacco smoke and can be easily cleaned.
- **Acoustic Performance:**
Ceilume panels provide noise reduction.



- **Low-Emitting Materials:**
Ceilume products are Greenguard Gold certified and formaldehyde free.
- **Indoor Air Quality:**
Ceilume panels and tiles do not release fibers or VOCs, absorb or emit odors, or support mold or mildew. They are readily cleaned.
- **Interior Lighting and Daylighting:**
White panels and tiles have high light reflectance. Translucent and transparent panels can be used below skylights.

Innovation

- **Unique Products:**
Ceilume has CAD/CAM capabilities to produce molds for your innovative ideas.
- **Long Service Life:**
Our panels and tiles are durable, robust, and easy to clean.

- **Reduce Resource Requirements:**
Ceilume products use 80% less material to manufacture and ship than mineral fiber acoustic ceiling products.
- **Closed-Loop Lifecycle:**
Panels and tiles are recyclable and can be returned to us after use.

CODE-RELATED APPROVALS AND LISTINGS

- **IAPMO Uniform Evaluation Service:**
Evaluation Report 0310 is our most recent evaluation report and addresses most vinyl panels.
- **California State Fire Marshal:**
Listing 2200-1622:0100
- **CertMark International:**
CMI Evaluation Report CER-3101.
- **FM Approvals:**
Suspended Plastic Ceilings, Class Number 4651
- **ICC Evaluation Service (ICC-ES):**
Evaluation Report ESR-2451.
- **Underwriters Laboratories (UL):**
Product Listing BLME.R4036.

OTHER CERTIFICATIONS AND COMPLIANCES

- **Greenguard Gold Certification:**
Ceilume panels and tiles are certified to comply with California's Department of Public Health Services Standard Practice for Specification Section 01350 for chemical emissions from building products used in schools, healthcare, and critical facilities.



- **U.S. Federal Emergency Management Agency (FEMA):**
Under Flood Damage-Resistant Material Requirements for Buildings Located in Special Flood Hazard Areas under the National Flood Insurance Program; Technical Bulletin 2 (2008), Ceilume lay-in ceiling panels are a Class 4 Material, defined as, "These materials can survive wetting and drying and may be successfully cleaned after a flood to render them free of most harmful pollutants. Materials in this class may be exposed to

and/or submerged in floodwaters in interior spaces and do not require special waterproofing protection.” Consider use of uplift prevention clips to reduce likelihood that panels will be dislodged.

• **U.S. Food and Drug Administration (FDA):**

Many Ceilume ceiling styles comply with FDA Food Code (2013) requirements that ceilings in food establishments be smooth, durable, easily cleanable, and nonabsorbent, and with Code of Federal Regulations, Title 21, requirements for ceilings in food-manufacturing facilities. Our light transmitting and drop-out can help meet FDA recommendations to avoid overhead surfaces (such as lighting and sprinklers) that can collect contaminants.

TEST DATA

• **Cleanability and Stain Resistance:**

Our products have been used for decades without excessive staining. Contact us if you have concerns about specific contaminants; we will provide testing or send samples for you to test.

• **Flame Resistance:**

Plastics used by Ceilume are V0-Rated under UL-94 – Flame Rating. They are self-extinguishing: flaming combustion stops within 10 seconds after removal of heat source and glowing combustion stops within 30 seconds. They do not drip flaming particles that could ignite cotton.

• **Light Reflectance:**

Light reflectance value (LRV), ASTM E1477:

White Vinyl: Approx. 83%

Translucent White Vinyl, 0.013-inch Thick: Approx. 52%

• **Light Transmittance:**

Total luminous transmittance for 10 degree observer under illuminant D-65, ASTM E1477:

Translucent White Vinyl, 0.013-inch Thick: 47%

Transparent Vinyl,



0.013-inch Thick: 68%

• **Noise Reduction:**

Noise reduction coefficient (NRC), ASTM C423, Mounting E; results vary depending upon panel style:

0.013-inch Thick Vinyl: 0.25 to 0.30

0.013-inch Thick Vinyl with AcoustoTherm backpanels: 0.35 to 0.40

0.013-inch Thick Vinyl with Soniguard Insulation: 0.50

Products with improved performance are in development; contact factory for information.



• **Surface Burning Characteristics:**

Ceilume products are Class A rated (flame spread less than 25 and smoke developed less than 450), ASTM E84.

PACKAGING, HANDLING, PROTECTION

• **Packaging:**

Products are shipped in corrugated cardboard containers with, when necessary, paper or plastic wrap or foam. Packaging is recyclable.

• **Shipping:**

Ceilume panels and tiles nest for efficient packaging and shipping.

• **Storage:**

Store in cartons that are stood on edge and in a single layer (no stacking); keep panels and tiles vertical. Store away from direct sunlight, temperatures over 100°F (38°C), and moisture.

• Handling:

Handle cartons as marked to prevent damage. Open carefully; avoid damaging surface of panels with knives.

LIMITED WARRANTY

Ceilume guarantees that ceiling panels and tiles will be free from manufacturing defects for five years. If a manufacturing defect occurs within the terms and conditions of this warranty, you will be supplied with new material to replace the defective parts, subject to approval by Ceilume. The replacement materials will be of the same or similar design and quality. THERE ARE NO IMPLIED WARRANTIES, REPRESENTATIONS OR CONDITIONS, EXCEPT THOSE REQUIRED BY STATUTE, AND THEY SHALL NOT EXTEND BEYOND THE TERM OF THE WARRANTY APPLICABLE TO YOUR PURCHASE. WE EXCLUDE AND WILL NOT PAY ANY CONSEQUENTIAL OR INCIDENTAL DAMAGE, LOSS OR EXPENSE. See full warranty terms and conditions at www.ceilume.com.

**LIMITATIONS**

Use products as required by approvals, evaluation reports, and manufacturer's instructions.

SAFETY PRECAUTIONS

Observe good construction safety procedures, especially regarding cutting, eye protection, and ladders.

AVAILABILITY

Ceilume products are manufactured to order. Most orders are shipped within five business days. They can be ordered at www.ceilume.com, by calling +1 800-557-0654 (toll-free); or through dealers worldwide.

COST

Website shows suggested retail prices. Contact Ceilume or dealers for commercial discounts.

Installing ceilings beneath sprinklers can result in significant project savings. For example, sprinklers location can be optimized without regard for coordinating heads with centers of panels. In addition, coordination of trades and installation sequence is easier and more economical. Ceilume can provide a detailed construction cost estimate comparing installed cost of Ceilume ceilings beneath sprinklers to the cost of a mineral fiber ceiling with penetrating sprinklers; call Ceilume or visit website for a copy.

PRODUCT PROPERTIES

PANELS AND TILES**• Panels:**

Styles with flanged edges (to provide stiffness) are available in either 0.013-inch or 0.030-inch thick material; the thinner material is suitable except in areas where abuse or rough treatment is expected. Styles without flanged edges are generally 0.030-inch thick material.

• Tiles:

Tiles are generally 0.030-inch thick material to prevent telegraphing of adhesive.

MATERIALS

Ceilume panels and tiles are offered in two materials. Both are Greenguard Gold Certified for low VOC emissions and are offered in a variety of finishes.

• Vinyl:

All panels and tiles are offered in a high quality rigid vinyl that is made without phthalates and maintains its strength, resilience, and beauty for decades. It is a Type 3 plastic and can be recycled in most communities. It can be used for drop-out ceilings installed beneath sprinklers.

- **PET:**
Polyethylene terephthalate is widely used for soft drink bottles and other consumer products. We use PET with 40% post-consumer recycled content. It costs slightly more than vinyl and is offered only on selected products. It is a Type 1 plastic that can be recycled in most communities.

FINISHES

- **Colors and Patterns:**
Our standard finishes are white and four solid colors, three faux metallic finishes, and three faux woodgrain finishes; all have a matte surface. Translucent white and transparent materials are also available. Our products contain UV stabilizers but, like all organic materials, may fade over time. Ask for samples before making product selections. Contact factory for custom colors and patterns.



- **Finishes for Inverted Installation:**
The reverse side of white and solid colored units may have a slightly different look than the normal side. Faux finishes are applied to only one side and must be specially ordered for use on inverted installations.

ACCESSORIES

- **AcoustoTherm® Backpanels:**
AcoustoTherm® has an inverted-pan shape and nests atop our panels to create a three-inch deep air pocket that dampens acoustic vibrations and provides thermal insulation.

Made from 0.013-inch thick translucent vinyl with a frosted finish, AcoustoTherm® can be used with luminous ceilings to diffuse above-ceiling light sources

and reduce shadows caused by detritus that would otherwise accumulate directly on ceiling panels. For most uniform lighting, light source should be at least six inches above backpanels.

AcoustoTherm® has Class A surface burning characteristics and can be used with or without fire sprinklers installed above or beneath ceilings.

AcoustoTherm® is nominally 24 x 24 inches and requires six-inch clearance. When two backpanels are used above a translucent 24 x 48 inch panel, a shadow will be visible at the center of panel.

- **Soniguard™ Drop Ceiling Insulation:**
Soniguard™ is thermal-bonded, non-woven batting made from polyester fiber that is safe for skin contact. Batts are 24 x 24 x 1.5 inch nominal; use two above a 24 x 48 inch panel. Do not install beneath fire sprinklers.
- **Thermal Resistance:**
R-6, ASTM C518
- **Water Vapor Sorption:**
0.0033%, ASTM C1104
- **Surface Burning Characteristics:**
Class A, ASTM E84
- **Does not promote fungal growth/odor/corrosion:**
ASTM C665
- **Fungal Resistance:**
0 (no growth), ASTM C1338

- **Uplift Prevention Clips:**
Use to discourage access above ceiling and to reduce rattling due to air pressure fluctuations. Installation is progressive; leave strategically located panels without clips and mark locations for future access. Two to four clips per panel is generally sufficient, depending on panel size and conditions of use. Clips may be used with drop-out panels.

- **Decorative Strips:**
Strips can be applied over 15/16-inch wide ceiling tees to match or contrast color of panels. Strips are available in standard colors and faux finishes. They are 24-inch long x 0.030-inch thick Class A rated vinyl with an adhesive backing. A dot-dash pattern adds visual appeal and assists with aligning strips. Strips cover only the bottom of tees, so edges of tees could remain visible

when viewed closely or in critical light; specify painted grid if this is not acceptable.

ACCESSORIES FOR TILES

- **Decorative Strips:**
See above.
- **Ceilume Ceiling Tile Adhesive:**
Adheres tiles to gypsum board, plaster, concrete, wood, and painted surfaces. It has sufficient tack to hold tiles in place, open time to allow tiles to be repositioned, and body to be used over many textured substrates. It is low odor, non-flammable, cleans with water, has zero VOCs, and meets ASTM C557 and AFG-01. It ships with a Clean-Cut™ tool that cuts nozzle at the recommended tip angle and diameter.



MASS AND DIMENSIONS

- **Mass:**
Ceilume ceiling elements weigh approximately 0.10 psf with 0.013-inch thick material and 0.215 psf for 0.030-inch thick material. Their light weight simplifies installation, minimizes shipping costs, reduces potential for lifting and dropping injuries, and reduces seismic and overall dead load. See building codes for ceiling loads to be used in structural design.
- **Sizes:**
Panels and tiles are nominal 24 x 24 and 24 x 48 to fit standard ceiling grids; actual dimensions are 1/4 inch less. Height of a panel or tile is determined by its relief; panels can project both above and below face of ceiling grid and must be considered when determining clearances.

- **Factory Cutouts:**
Many of Ceilume's panels and tiles are available with factory-made openings for down lights and other ceiling penetrations.

PRODUCT PLACEMENT

INSTALLATION - GENERAL

See full installation instructions at www.ceilume.com.

- **References:**
Systems Handbook and Seismic Construction Handbook by Ceiling & Interior Systems Construction Association (CISCA) provide widely-accepted guidelines for ceiling installation.
- **Appurtenances:**
Ceilume products are not intended to support backloads other than AcoustoTherm® and Soniguard™. Light fixtures, security cameras, smoke detectors, public address speakers, signage and other ceiling appurtenances should be mounted on suspension grid or attached to structure above.
- **Layout, Borders, and Penetrations:**
Typically, ceiling should be laid out so that panels or tiles around ceiling perimeter (border) have the same width on opposite sides of ceiling.

If the panel or tile style selected for the room has deep relief, you may want to use a different style of panel or tile for border units. We offer a number of styles with low relief for use as borders.

Additional consideration should be given to locating penetrations through ceiling. Panel and tile styles with flat surfaces or shallow relief can be neatly trimmed around penetrations.



• **Painting:**

Be creative; decorative finishing techniques can accent bas-relief patterns and achieve unique patinas. Products should be clean and dry before painting; do not use harsh solvents or aggressive cleaners. Test paint on sample before proceeding. Painting voids ratings, approvals, and certifications. Do not paint drop-out ceilings beneath sprinklers.

• **Tools:**

Ceilume ceilings cut easily with heavy-duty scissors or aviation snips. Aviation snips are available on our website.



INSTALLATION - PANELS

• **Suspension System:**

Ceilume panels are intended for installation in standard ceiling suspension grid systems. Most panel styles are intended for grids with 15/16-inch face (1 inch nominal, 24 mm); some for slimline 9/16-inch face (14 mm). In wet areas, a fiberglass suspension system can match

the water resistance of Ceilume panels.

Suspension system should comply with and be installed according to ASTM C635 – *Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings*, ASTM C636 – *Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels*, and other applicable standards.

We offer placards to install in building notifying owner and maintenance crews that above-ceiling sprinklers must comply with code requirements.

INSTALLATION - TILES

• **Preparation:**

Remove or cover heavily textured ceilings. Repair or replace substrates that are not sound. Provide a flat and even substrate.

• **Adhesive and Fasteners:**

Adhesives allow minor adjustment prior to setting to accommodate substrate irregularities. Substrates must be clean and dry; primed or painted surfaces give best results. (A painted substrate can also create a reveal look if gaps are left between tiles.)

Use hook and loop fasteners or through-face fasteners where above-ceiling access is required.

MAINTENANCE INSTRUCTIONS

Clean panels and tiles with clean, soft, damp rag. Stubborn spots can be removed with cleaners such as Fantastik or Windex. Do not use cleaners containing harsh solvents or aggressive ingredients such as bleach, grease remover, or strong detergents. Test in inconspicuous location before proceeding.



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