

Manufactured and proven in Japan for more than 30 years, the CERACLAD Rainscreen Exterior Siding System:

- allows moisture to escape from within walls
- helps prevent mold, health problems and dry-rot in walls
- helps provide a healthy living environment
- improves sustainability of the building
- provides savings in maintenance and energy consumption
- is available in a wide variety of colors and textures
- creates a seamless panelized appearance
- reduces construction time and cost
- is environmentally low impact by using approximately 45% recycled materials

CERAMIC COATED PANELS

CERACLAD ceramic coated panels are available in 8 styles and 15 factory finished proprietary colors and come with a 20 year color guarantee.

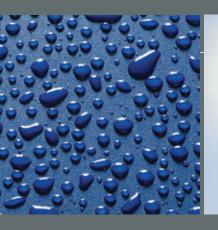


CUSTOM COLOR PANELS

CERACLAD CREATIV[™] custom color panels are made with two factory-applied finish coats to protect the panels from ultraviolet rays and minimize discoloration on the building exterior. They come with a 15 year finish warranty.









The heat-resistant, UV-blocking ceramic coated finish on CERACLAD siding repels moisture, provides a high performance surface that resists fading and discoloration, reduces maintenance costs for repainting and increases the value of the building.

The shiplap and the factory applied gasket ensure a tight seal between joints

Protects from the outside – and from the inside

Should any rainwater find its way past the exterior siding

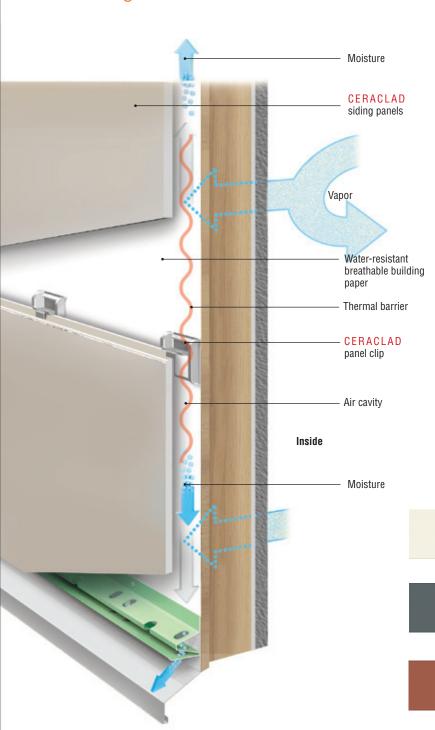
panel, the ventilation layer discharges the moisture outside. That same ventilation layer helps guide humid air from inside to the outside, preventing condensation from forming on the sheathing.

Buildings using the CERACLAD Rainscreen Exterior Siding System are more energy efficient, and sustainable, have fewer maintenance problems and provide a healthier living environment for their occupants.





CERACLAD is a ceramic-coated siding assembly that incorporates proven rainscreen technology. Suitable for residential and commercial buildings, the CERACLAD Rainscreen Exterior Siding System consists of pre-finished siding panels and innovative mounting clips and accessories, all of which have been designed for ease of installation.



Manufactured and proven in Japan for more then 30 years, the CERACLAD system incorporates a ventilation layer in the exterior wall structure, allowing moisture to escape from within walls, which helps prevent mold, health problems and dry-rot in walls. The end result is a high performance vented wall assembly that provides structures with long-term protection against water infiltration, and low maintenance wall surfaces with a long lasting, beautiful appearance.

CERACLAD offers a broad palette of colors, rich textures and unique appearance, all backed with a 50 Year Limited Warranty and a 20 Year Limited Color Warranty for pre-finished ceramic coated panels, and a 15 Year Limited Finish Warranty for CREATIV™ custom color panels.





CERACLAD exterior siding panels are a long lasting, energy and resource efficient building product. Consisting of approximately 45% recycled material, the panels are 100% recyclable, factory finished with no VOC, and contain no asbestos.

A super weather resistant ceramic coating minimizes degradation of the exterior wall structure and controls color fading caused by exposure to UV rays so CERACLAD siding panels retain their "new" appearance longer, and the exterior wall structure lasts longer too.

OERACLAD siding panels allow building owners to refrain from using environmentally harmful products or excessive amounts of water to maintain the clean appearance of the building. The ventilation layer allows the trapped heat in the exterior wall structure to escape into the environment, helping to maintain consistent

temperatures inside the building and reducing energy consumption.



In our manufacturing plants, all waste water discharged from the manufacturing process is appropriately treated by the latest waste water treatment facilities and reused as much as possible. The use of advanced cogeneration systems with higher thermal efficiency empowers the plants to continue operating while maintaining a strong commitment to the conservation of energy.

LEED-certified projects using CERACLAD



Redding School of Arts, CA, USA-LEED Platinum Certified



Sawyers Row, OR, USA-LEED Platinum Certified



University Highlands, BC, CAN-LEED Gold Certified



High Point Neighborhood Center, WA, USA-LEED Gold Certified



Hilltop Medical, WA, USA-LEED Gold Certified



Products used: Contemporary Smooth – Wheat Contemporary Smooth – Brass



"We chose CERACLAD because it's made from recycled materials, has a factory applied ceramic-based finish, and can easily handle the strong winds and intense sun exposure."



CONTEMPORARY SMOOTH is available in the following

CERACLAD CONTEMPORARY SMOOTH is available in the following 15 ceramic colors plus our CREATIV™ custom color program:



Basic Specifications						
Panel Type	Solid Core ⁴	Dimensions	W: 18" (455 mm) x L: 10' (3030 mm) x T: 5/8" (16 mm)			
Application Method	Vertical or Horizontal	Coverage	15 ft² (1.38 m²)			
Coating Options	Ceramic (15 colors) Creativ™ Custom Colors	Weight	60 lb. (27 kg)			

- 1. The product color tones on this sheet may appear slightly different from the actual products. Final color selection should be made from product samples.
- 2. Colors and textures are subject to change.
- 3. Damage caused by any product installation, repair, or replacement that is not in accordance with KMEW's technical manual, as well as damage caused by product installation on inappropriate buildings/structures, is specifically excluded from warranty coverage. Please review KMEW's technical manual and website for this product.
- 4. Please note that this texture uses solid core panels and cannot be used in areas where freeze-thaw weathering occurs more than 80 days per year.



Products used: Textured Stucco – Linen Contemporary Smooth – Euro Brown



"Re-cladding with CERACLAD not only elevates the property value with its aesthetic improvements, but results in big savings for the owners because it requires very little maintenance."



TEXTURED STUCCO

CERACLAD TEXTURED STUCCO is available in the following 15 ceramic colors plus our CREATIV™ custom color program:



Basic Specifications					
Panel Type	Hollow Core	Dimensions	W: 18" (455 mm) x L: 10' (3030 mm) x T: 5/8" (16 mm)		
Application Method	Vertical or Horizontal	Coverage	15 ft² (1.38 m²)		
Coating Options	Ceramic (15 colors) Creativ™ Custom Colors	Weight	42 lb. (19 kg)		

- 1. The product color tones on this sheet may appear slightly different from the actual products. Final color selection should be made from product samples.
- $2. \ Colors \ and \ textures \ are \ subject \ to \ change.$
- 3. Damage caused by any product installation, repair, or replacement that is not in accordance with KMEW's technical manual, as well as damage caused by product installation on inappropriate buildings/structures, is specifically excluded from warranty coverage. Please review KMEW's technical manual and website for this product.

"The high quality and durability of the CERACLAD siding system will produce long-term cost savings for the owner.

Funds that would have been allocated to painting and replacing the siding can now be spent on other areas."



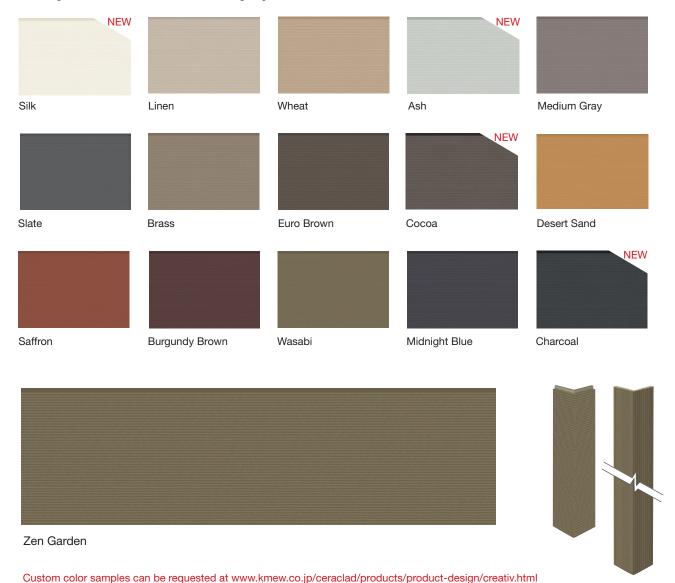
Products used: Zen Garden – Wasabi Contemporary Smooth – Desert Sand





ZEN GARDEN

CERACLAD ZEN GARDEN is available in the following 15 ceramic colors plus our CREATIV™ custom color program:



Basic Specifications						
Panel Type	Hollow Core	Dimensions	W: 18" (455 mm) x L: 10' (3030 mm) x T: 5/8" (16 mm)			
Application Method	Vertical or Horizontal	Coverage	15 ft² (1.38 m²)			
Coating Options	Ceramic (15 colors) Creativ™ Custom Colors	Weight	42 lb. (19 kg)			

- 1. The product color tones on this sheet may appear slightly different from the actual products. Final color selection should be made from product samples.
- 2. Colors and textures are subject to change.
- 3. Damage caused by any product installation, repair, or replacement that is not in accordance with KMEW's technical manual, as well as damage caused by product installation on inappropriate buildings/structures, is specifically excluded from warranty coverage. Please review KMEW's technical manual and website for this product.



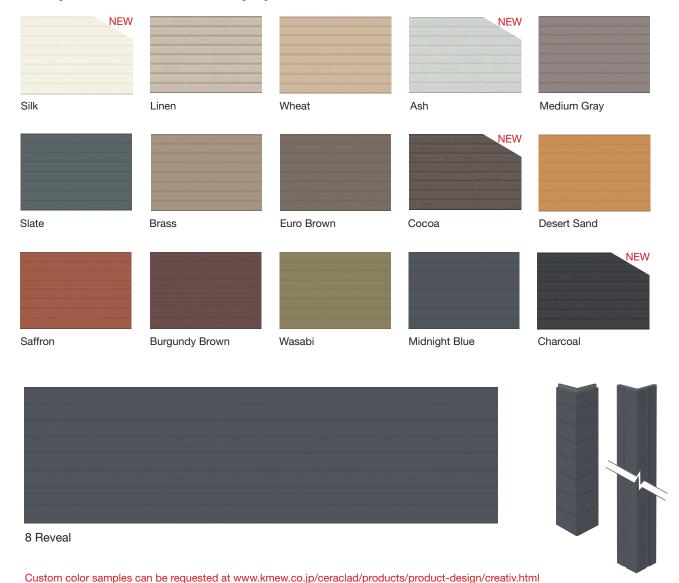
Products used: 8 Reveal – Burgundy Brown Textured Stucco – Linen





8 REVEAL

CERACLAD 8 REVEAL is available in the following 15 ceramic colors plus our CREATIV™ custom color program:



Basic Specifications					
Panel Type	Hollow Core	Dimensions	W: 18" (455 mm) x L: 10' (3030 mm) x T: 5/8" (16 mm)		
Application Method	Vertical or Horizontal	Coverage	15 ft² (1.38 m²)		
Coating Options	Ceramic (15 colors) Creativ™ Custom Colors	Weight	42 lb. (19 kg)		

- 1. The product color tones on this sheet may appear slightly different from the actual products. Final color selection should be made from product samples.
- 2. Colors and textures are subject to change.
- Damage caused by any product installation, repair, or replacement that is not in accordance with KMEW's technical manual, as well as damage caused by product installation on inappropriate buildings/structures, is specifically excluded from warranty coverage. Please review KMEW's technical manual and website for this product.





"Along with the rainscreen technology, architects are pleased with the wide-range of colors CERACLAD offers."





CAST STRIPE

CERACLAD CAST STRIPE is available in the following 4 ceramic colors plus our CREATIV™ custom color program:







Pearl

Ash

Charcoal



Amber







Custom color samples can be requested at www.kmew.co.jp/ceraclad/products/product-design/creativ.html

Basic Specifications					
Panel Type	Hollow Core	Dimensions	W: 18" (455 mm) x L: 10' (3030 mm) x T: 5/8" (16 mm)		
Application Method	Vertical or Horizontal	Coverage	15 ft² (1.38 m²)		
Coating Options	Ceramic (4 colors) Creativ™ Custom Colors	Weight	42 lb. (19 kg)		

- 1. The product color tones on this sheet may appear slightly different from the actual products. Final color selection should be made from product samples.
- 2. Colors and textures are subject to change.
- 3. Damage caused by any product installation, repair, or replacement that is not in accordance with KMEW's technical manual, as well as damage caused by product installation on inappropriate buildings/structures, is specifically excluded from warranty coverage. Please review KMEW's technical manual and website for this product.





Products used: Fiotto – Charcoal Fiotto – Cream







CERACLAD FIOTTO is available in the following 6 ceramic colors:









Cream

Wheat







Charcoal

French Beige

Euro Brown





Fiotto

Basic Specifications					
Panel Type	Hollow Core	Dimensions	W: 18" (455 mm) x L: 10' (3030 mm) x T: 5/8" (16 mm)		
Application Method	Vertical or Horizontal	Coverage	15 ft² (1.38 m²)		
Coating Options	Ceramic (6 colors)	Weight	42 lb. (19 kg)		

- 1. The product color tones on this sheet may appear slightly different from the actual products. Final color selection should be made from product samples.
- 2. Colors and textures are subject to change.
- 3. Damage caused by any product installation, repair, or replacement that is not in accordance with KMEW's technical manual, as well as damage caused by product installation on inappropriate buildings/structures, is specifically excluded from warranty coverage. Please review KMEW's technical manual and website for this product.



"CERACLAD Color Technology allows for multi-tonal color that captures the look of real wood. Unlike wood siding, CERACLAD is highly durable and requires minimal maintenance."





RUSTIC WOOD

CERACLAD RUSTIC WOOD is available in the following 3 ceramic colors:

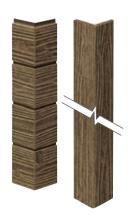






Bronze Caramel Coffee

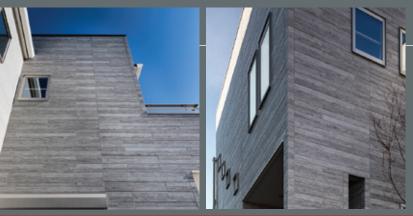




Rustic Wood

Basic Specifications					
Panel Type	Hollow Core	Dimensions	W: 18" (455 mm) x L: 10' (3030 mm) x T: 5/8" (16 mm)		
Application Method	Vertical or Horizontal	Coverage	15 ft² (1.38 m²)		
Coating Options	Ceramic (3 colors)	Weight	42 lb. (19 kg)		

- 1. The product color tones on this sheet may appear slightly different from the actual products. Final color selection should be made from product samples.
- 2. Colors and textures are subject to change.
- 3. Damage caused by any product installation, repair, or replacement that is not in accordance with KMEW's technical manual, as well as damage caused by product installation on inappropriate buildings/structures, is specifically excluded from warranty coverage. Please review KMEW's technical manual and website for this product.









COMING IN APRIL, 2018

Our customers tell us they like the texture created by pouring concrete into a wooden frame. We are developing a texture with a wood framed pattern on concrete using CERACLAD printing technology. This wood grain texture gives our Board Formed Concrete panels a softer and warmer look.

















Our Board Formed Concrete panels will be available in ceramic coated only.

Basic Specifications					
Panel Type	Hollow Core	Dimensions	W: 18" (455 mm) x L: 10' (3030 mm) x T: 5/7" (18 mm)		
Application Method	Horizontal	Coverage	15 ft² (1.38 m²)		
Coating Options	Ceramic	Weight	49 lb. (22 kg)		

- 1. The product color tones on this sheet may appear slightly different from the actual products. Final color selection should be made from product samples.
- 2. Colors and textures are subject to change.
- 3. Damage caused by any product installation, repair, or replacement that is not in accordance with KMEW's technical manual, as well as damage caused by product installation on inappropriate buildings/structures, is specifically excluded from warranty coverage. Please review KMEW's technical manual and website for this product.

Our Patterns - Your Flair for Color!

We heard you! You wanted more choices.
We responded by bringing you the CERACLAD CREATIV™ custom color program.



Creativ™ Program Summary

1. Color Selection Select your color, submit your order form (available on our website)

and receive your samples.

2. Color Approval Sign the back of one sample (using a black permanent marker).

Complete and sign the Custom Color Product Approval Form provided when you received the custom color samples. Send the signed sample

and completed form to CERACLAD.

3. Order Product Submit your purchase order as you normally would and include the

PIN as your color selection.



Our CREATIV $^{\text{m}}$ custom color finish utilizes a two-coat finish system: color plus protective coating to provide additional UV resistance and color stability.

The minimum order is just 40 pieces per custom color selection.**

CREATIV $^{\text{m}}$ orders will be shipped from our finish factory in eight (8) weeks from the date of acceptance of your purchase order.

Custom color samples can be requested at: www.kmew.co.jp/ceraclad/products/product-design/creativ.html

Program Details

Custom colors may be selected from a CERACLAD CREATIV[™] color swatch by Miller Paint or you may provide a Benjamin Moore or Sherwin Williams color number and let us match your selection for you.* (CERACLAD CREATIV[™] is available in all our of textures except Rustic Wood, Board Formed Concrete and Fiotto.)

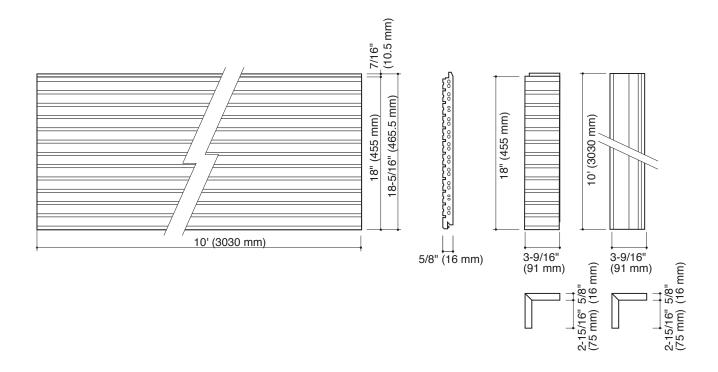
CERACLAD will produce three (3) color samples 4" x 8" for your approval. CREATIV™ samples will be sent out within two weeks of receipt of the Color Selection Form, available on our website at www.kmew.co.jp/ceraclad/products/product-design/creativ.html. If the samples don't meet your requirements a new Color Selection Form will need to be submitted. Upon acceptance of the color sample, the Custom Color Product Approval Form should be submitted. (You will receive this with your samples.) This form will include the Project Identification Number (PIN) which must be included on any and all purchase orders to identify the approved color selection.

^{*}Certain colors are only available for indoor applications. Contact your local representative for more details or assistance with your custom color selection.

^{**}The minimum quantity only applies to the initial order quantity. Additional material may be ordered with a minimum quantity of only 20 panels to supplement the completion of an ongoing project.



CERACLAD provides the complete installation package to your jobsite including panels, accessories and hardware. All products are individually packed and marked for your convenience. CERACLAD helps you to deliver fast, high quality rainscreen installations on every project – every time.



Panel Clip	Corner Clip	Starter Bar	Caulking Joiner	Face Nail
		ich hait hair		
Face Screw	Wood/Steel Screw	Touch-up Paint	Spacer Block	Repair Putty
T	-			

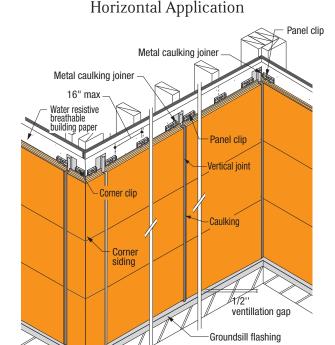
Product Applications

All CERACLAD siding panels are designed to allow both horizontal and

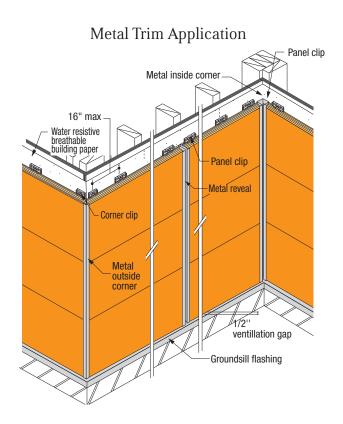
vertical application, providing greater design flexibility for architects. Installers will find that the innovative panel clip system makes installation easy and straightforward no matter what application is chosen.

In order to have an effective rainscreen system, a fully ventilated cladding with openings to the exterior, both at the top and bottom of the wall, is critical. Simply providing an air space behind the cladding is not enough. In addition, tests found that in order to maximize air flow, each story should have a separate air cavity.

Metal "Reveal Joints' may be used in lieu of a caulking joint.



Vertical Application Furring strip Metal caulking Metal caulking joiner joiner Water resistive OSB/Plywood breathable building paper sheathing Panel clip max Starter bar for 16" vertical installation Stainless steel face Groundsill flashing Caulking Caulking Outside corner siding



The CERACLAD Advantage





Easy to Specify

We take the guesswork out of specifying a fully ventilated rainscreen. The CERACLAD system includes everything you need for a functional ventilated rainscreen, even the fasteners!



Easy to Install

CERACLAD is easy to install and requires minimal tools or training. Our panels can be cut in the field with a circular saw and fiber cement blade.



Easy to Maintain

With our proprietary Ceramic coating, the color and finish of your project will stay looking vibrant and new for decades, resulting in less maintenance over the lifespan of the building.

Our website has all the detailed information you need to make specifying your next CERACLAD project simple:

- Product photos and details
- Installation Videos
- 3-Part Spec
- Testing Data
- Installation Guide and Manual
- CAD Details



For more information go to: www.kmew.co.jp/ceraclad/technical-information





Panel Characteristics

CERACLAD uses the latest technology to achieve high quality, high functionality, versatile design, and easy installation.

			Contemporary Smooth	Textured Stucco	Zen Garden	8 Reveal	Cast Stripe	Fiotto	Rustic Wood
Design	Textu	ires							
	Calava	Ceramic	Proprietary 15 colors	Proprietary 15 colors	Proprietary 15 colors	Proprietary 15 colors	Proprietary 4 colors	Proprietary 6 colors	Proprietary 3 colors
	Colors	Creativ	Custom Colors	Custom Colors	Custom Colors	Custom Colors	Custom Colors	N/A	N/A

	Panel	Туре	Solid Core	Hollow Core				
	Dimer	ısion		W: 18"×L: 10'×T: 5/8"				
	Weight		60lb.	60lb. 42lb.				
	Fire Res	stance		Non-combustible, Class A rated				
Base	Assembl Resist			Please refer to Pg. 33				
Material	Recycled Mate	erial Content		Approximately 45%				
	Dimensiona	al Stability		The maximum dimensional change per year is approximately 0.0	15%			
	Freeze- Resist		Limited*	Limited* Yes				
	Impact Resistance		Yes					
	Warra	anty	50 Year Limited Warranty					
	Finish		Factory finished					
	Protective	Ceramic	Ceramic coating in proprietary colors					
	Top Coat	Creativ	UV resistant coating in custom colors N/A					
Coating	Graffiti	Ceramic		Yes*				
	Resistant	Creativ		N/A				
	Warranty	Ceramic		20 Year Limited Color Warranty				
	vvairanty	Creativ		15 Year Limited Finish Warranty	N/A			
	Rainso	reen		Built-in Rainscreen System through clip-on installation				
Wall Assembly	Thermal Ba	rrier Effect	0.089 m ² K /W 0.114 m ² K /W					
7.000	Noise Barrier	Performance	Acoustic transmission loss 29db in the 500Hz, 33db in the 1000Hz					
Delivery	Cera	mic		Made in Japan, 8 -10 weeks lead time, pre-packaged job pack				
Delivery	Crea	tiv	Fir	nished in USA, 6 – 8 weeks lead time, pre-packaged job pack	N/A			

^{*}Solid core products / Contemporary Smooth panels can not be used in areas where freeze-thaw weathering occurs more than 80 days per year.
*Effect of graffiti resistance may vary depending on types of graffiti materials used and the performance of the ceramic coating may be affected by graffiti removal.

Production Technology

LIGHT WEIGHT

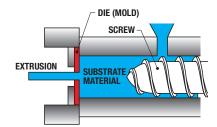
HOLLOW CORE

CERACLAD hollow core panels are manufactured by an extrusion process that produces lower density and lighter weight panels that are easier to install and reduce stress on the building structure.

Hollow core panels have cavities in the material to help reduce weight



Our extrusion process produces lower density and lighter weight panels

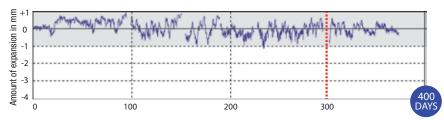


EXCELLENT DIMENSIONAL STABILITY

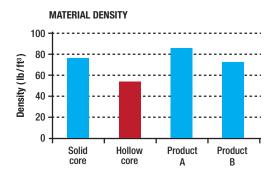
HOLLOW CORE / SOLID CORE

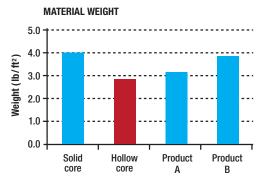
All CERACLAD panels are subjected to autoclave curing and have excellent dimensional stability. Other cement panel products can take several years to fully cure and there is risk of warpage of the base material over time. CERACLAD panels are cured at high pressure and temperatures to accelerate the process. As an example, we tested a CERACLAD hollow core panel. After 400 days there was almost no expansion or contraction of the product.

LENGTH CHANGE OF HOLLOW CORE PANEL IN EXPOSURE TEST?



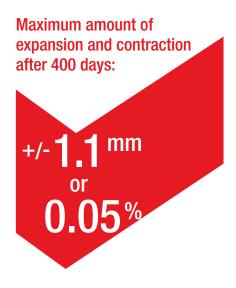
^{*}Dimensional change of 2750mm section of panel







All CERACLAD panels are cured in an autoclave





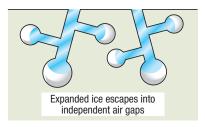
Base Material Technology

EXCELLENT RESISTANCE TO FREEZING/THAWING

HOLLOW CORE

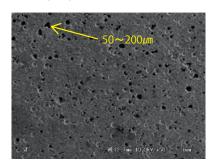
When moisture contained inside the base material freezes, it expands and can cause frost damage. Manufactured with an extrusion process, hollow core panels have a large number of fine independent voids inside the base material. This absorbs and relieves the pressure due to volume expansion caused by moisture freezing.

After freezing



Independent gaps relieve the pressure that occurs when contained water freezes, preventing frost damage

Close-up of panel surface



IMPACT RESISTANCE

HOLLOW CORE / SOLID CORE

Because CERACLAD panels are reinforced with thousands of fibers, impact resistance is improved as compared to stucco & thinner fiber-cement siding products.

MADE FROM RECYCLED MATERIAL

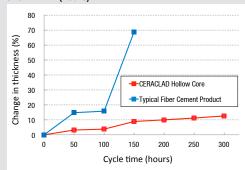
HOLLOW CORE / SOLID CORE

Fly ash and pulp are included as recycled materials, reducing resource consumption during production. Consisting of approximately 45% recycled material, the panels are 100% recyclable, factory finished with no VOC, and contain no asbestos.

ASTM C666 - FREEZING AND THAWING PERFORMANCE TEST

(Samples frozen in water at -20°C for 4hrs, then thawed in water at 20°C for 2 hrs)

CYCLE TIME (Hours)



Extruded CERACLAD products are more resistant to freezethaw weathering cycles than typical fiber cement siding products.



CERACLAD after 100 cycles - Hollow core demonstrates its strength even in cold climates



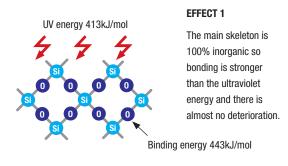
Typical fiber cement products after 100 cycles

Coating Technology

LONG-TERM WEATHER RESISTANCE

CERAMIC PANELS

CERACLAD's inorganic ceramic coating has excellent UV blocking properties to protect the colored layer from ultraviolet rays and minimize fading of the outer wall. Maintenance costs are reduced by virtually eliminating the need for repainting. This technology is exclusive to CERACLAD.



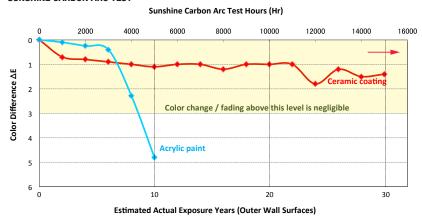
EFFECT 2

The gold symbols in the protective ceramic coating (at right) are UV absorbers. Since they are inorganic their ability to absorb ultraviolet rays is sustained.

EXPOSURE TEST

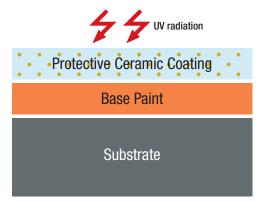
CERACLAD panels have been tested in Arizona, Florida and Singapore. Even in Singapore where ultraviolet rays are particularly strong, there was almost no color change. And in the Sunshine Carbon Arc test, an accelerated weathering resistance test which simulates 30 years of sun exposure, there was almost no color change on the CERACLAD panels.

SUNSHINE CARBON ARC TEST



CERACLAD ceramic coated panels are available in 15 proprietary colors and come with a 20 year color guarantee.

SECTIONAL VIEW OF CERAMIC COATED PANEL



UV absorber

The protective ceramic coating prevents the penetration of ultraviolet rays into the colored layer.

15 YEARS ACHIEVEMENT



2002



2017



Closeup of wall in 2017

Even after 15 years of performance the panels exhibited no "chalking", no deterioration of the ceramic coating and no color change.



Coating Technology

CUSTOM COLOR COATING

CREATIV™ PANELS

Choose your own color with our Creativ™ custom color program. CERACLAD Creativ™ panels are made with a color coat, followed by a clear coat to protect the panels from ultraviolet rays and to minimize discoloration on the building exterior. Other custom color products are made with just one color coat. This color protection reduces or eliminates the need for repainting and lowers maintenance costs. And our custom color panels come with a 15-year finish warranty.

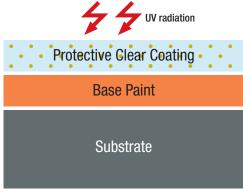
Our proprietary colors, custom colors and our ceramic and clear coatings are all applied in our factory during manufacturing to ensure quality.







SECTIONAL VIEW OF CUSTOM COLOR PANEL



UV absorber

The ultraviolet absorber layer prevents the penetration of ultraviolet rays into the colored layer.

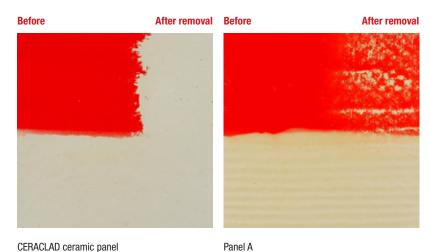


Coating Technology

EASY GRAFFITI REMOVAL

CERAMIC PANELS

The protective coating on CERACLAD ceramic panels makes removing graffiti possible. The images below show what happened when we painted a CERACLAD panel and a competitor's panel with standard acrylic lacquer paint and then tried to remove it with ethanol. The CERACLAD panel cleans up nicely; the other panel, not so much.





- Our ceramic coating does not actually repel graffiti but makes it possible to remove graffiti similar to "non-sacrificial" graffiti treatment products
- · The ability to remove graffiti will depend on the type of paint used
- · Ethanol is commonly used for graffiti removal
- CERACLAD does not warrant that the performance of the panel coating will be the same after graffiti removal



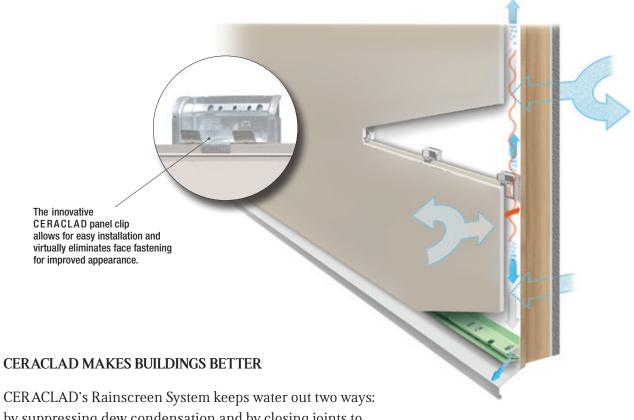




CERACLAD system products

MAKING INSTALLATION SIMPLE

Our clip fastening system makes it possible to shorten installation time and ensure installation quality. And your CERACLAD panels and CERACLAD accessories arrive at the construction site as a "job pack", ready to install.



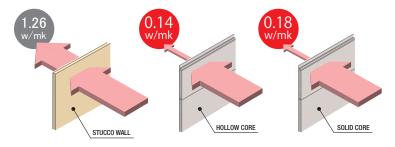
CERACLAD's Rainscreen System keeps water out two ways: by suppressing dew condensation and by closing joints to prevent rain water from intruding. This helps prevent decay, speeds moisture release and prevents mold from growing. The rainscreen layer also creates a thermal barrier to increase the energy performance of the building.

CERACLAD system products

THERMAL BARRIER EFFECT

CERACLAD exterior siding products show excellent thermal resistance properties because of their small thermal conductivity, offering nine times the thermal resistance performance compared to stucco. And because there is a ventilation layer, the rainscreen system further increases thermal resistance properties.

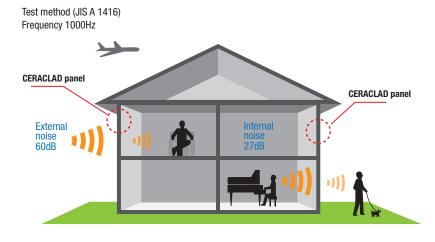
Test method (JIS A 1412)

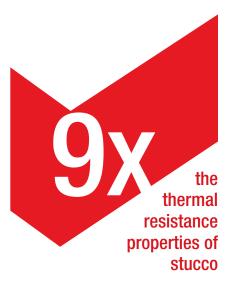


CERACLAD has 9 times the thermal resistance properties of stucco

NOISE BARRIER EFFECT

Outer walls covered with CERACLAD provide excellent protection from sound in the range of 250 to 1000 Hz where the human ear is most sensitive. In addition to protecting inhabitants against noise from the outside, sound leakage from the inside is also alleviated. And because there is a ventilation layer, the rainscreen system further increases noise barrier effect.





PRODUCT MATERIAL	THICKNESS	THERMAL CONDUCTIVITY W / (m•K)	THERMAL RESISTANCE (m²/K)/W)
Stucco Wall	-	1.26	-
Hollow Core	16mm	0.14	0.114
Solid Core	16mm	0.18	0.089

This is thermal resistance performance of only product. Thermal resistance ($(m^2/K)/W$) = Material thickness (m) \div Thermal conductivity (W/mK)

33dB in 1000Hz 29dB in 500Hz

Sound reduction



Certification

FIRE RESISTANCE CHARACTERISTICS

CERACLAD panels have a Class I (A) Flame Spread Classification-o, Smoke Developed Classification-o when tested in accordance with ASTM E84. Panels are Non-Combustible when tested in accordance with ASTM E136. CERACLAD hollow core and solid core panels comply with the requirements specified by ASTM E136-o9 to be considered as non-combustible.

ASSEMBLY WIND RESISTANCE

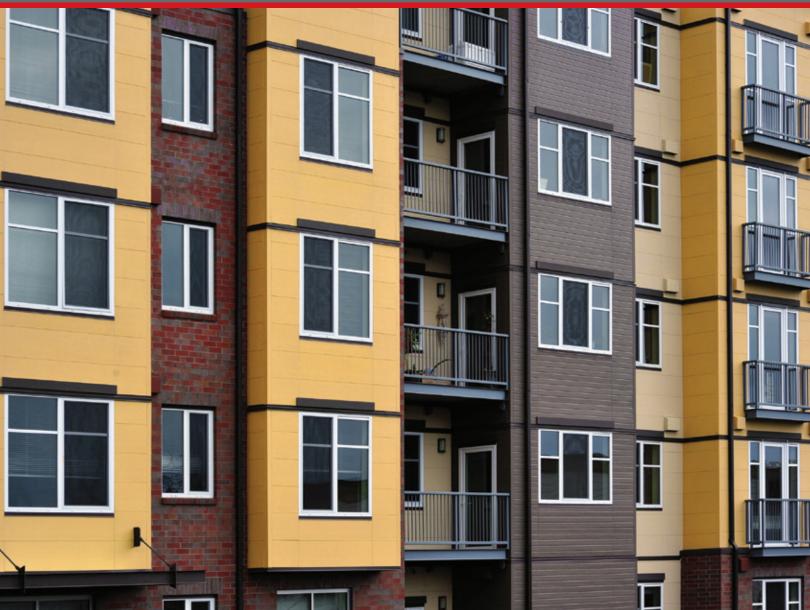
ASTM E72 Standard Test Methods of Conducting Strength Test of Panels for Building Construction. Maximum allowable transverse loads, based on a safety factor of 3, are available for the following combinations of wall assembly and CERACLAD assembly:

CERACLAD PANEL Hollow Core			
Wall Assembly	CERACLAD Assembly	Allowable positive and negative loads	
2x4 wood stud framing 16" o.c. with 1 /2" plywood sheathing	Horizontal application 1" No.9 screw per clip, clip placed 16" o.c. attached through plywood sheathing to wood stud	18 psf	
2x4 wood stud framing 16" o.c. with 1/2" ply- wood sheathing, and 5/8" Densglass Gold over plywood	Horizontal application 2-3/16" No.9 screw per clip, clip placed 16" o.c. attached through plywood and DensGlass Gold sheathing to wood stud	22 psf	
3-5/8" x 1-5/8" 20GA steel stud 16" o.c., 5/8" DensGlass Gold Sheathing, 1/2" plywood furring strips attached to steel studs	Horizontal application 1" No.9 screw 2 per clip, clip placed 16" o.c. attached to plywood furring	18 psf	
2x4 wood stud framing 16" o.c. with 1/2" ply- wood sheathing	Vertical application 1" No.9 screws 2 per clip attached into plywood sheathing	20 psf	
2x4 wood stud framing 16" o.c. with 1/2" plywood sheathing and 5/8" Densglass Gold over plywood	Vertical application 2-3/16" No.9 screws 2 per clip attached into plywood sheathing through DensGlass Gold	20 psf	

For SI: 1 inch=25.4mm, 1 foot=305mm, 1 psf=47.88Pa. For the latest performance values, please check the website.



Products used: Textured Stucco – Vanilla Textured Stucco – Euro Brown





WARRANTY

The CERACLAD Express Limited Transferable Warranty

1. WARRANTY COVERAGE:

KMEW USA, Inc. ("KMEW") warrants to the purchaser and to its transferees, including the original owner of the property upon which its Product (the KMEW CERAMIC COATING SIDING - the "Ceramic Product" or the KMEW CUSTOM COLOR SIDING - the "CREATIV™ Product", collectively, the "Product") is installed as external walls, and up to the first subsequent owner of the property (each a "Covered Person"- In the event of a multi-unit condominium, "Covered Person" shall mean the Condominium Association, Owners' Association, or similar governing body for the owner/residents of the structure) that when manufactured, the Product is free from defects in material and manufacture, and when used for its intended purpose and properly stored, installed and maintained per the CERACLAD installation manual, the Product shall be warranted as follows:

NOTE: All warranty periods discussed and defined herein shall be deemed to commence on the date of purchase of the Product by the party installing the Product or, as applicable, on the date of purchase of the Product by the property owner for third-party installation. This warranty is applicable only to installations occurring within the United States and Canada.

50 Year Limited Warranty: The Product shall: not incur structural cracking, rot or delaminate under normal wear, and shall resist damage caused by termites for a period of 50 years under normal use.

20 Year Limited Warranty: The Ceramic Product finish shall (A) retain its color and luster (meaning color fade shall not exceed color No.1 – 2 and E=9.6 in accordance with ISO 105-A02:1990, Test for color fastness - Part A02: Grey scale for assessing change in color) for color integrity, and shall not significantly (B) peel, (C) incur structural cracking, or (D) chip, for a period of 20 years under normal use.

15 Year Limited Warranty: The CREATIV[™] Product finish shall not significantly (A) peel, (B) incur structural cracking, or (C) chip, for a period of 15 years under normal use.

2. WARRANTY DURATION:

This Limited Warranty will continue in favor of a Covered Person for the respective consecutive years provided above.

3. WARRANTY EXCLUSIONS:

This Warranty covers only the specific manufacturing defects described in Section 1 above. Notwithstanding anything herein to the contrary, failures attributable to any other reason including, but not limited to, those set forth below, are hereby specifically excluded from warranty coverage:

- A. improper storage, shipping, handling, or installation (please refer to CERACLAD installation manual and website);
- B. improper design and/or construction of the building/structure to which the Product is attached;
- C. lack of, or improper, maintenance and repair after installation (please refer to CERACLAD installation manual and website);
- D. any unauthorized alteration of the Product;
- E. attachment of non-authorized accessories to the Product (for a list of authorized accessories, please refer to CERACLAD installation manual and website);
- F. warping, cracking, settling, or other movement or condition of the building/structure to which the Product is attached;
- G. substrate failures which cause or contribute to any compromise or failure of the Product. This exclusion applies to both supporting and non-supporting substrates (including, but not limited to, glass mat gypsum substrate/gypsum, plywood/OSB sheathing, and structural framing/stud) used under or attached to the Product;
- H. acts of God including, but not limited to, lightning, hurricanes, tornados, floods, earthquakes, mudslides or any other severe weather or natural phenomena;
- I. unauthorized sealer or caulking;
- J. paint, or other coating or finish applied after purchase;
- K. mold, mildew, fungi, bacteria, or any organism that is allowed to grow on the surface of the Product;
- L. industrial pollution (including acid, alkali, sulfur, noxious gases;
- M. exposure to salt spray, heat sources;
- N. submersion or continuous exposure to moisture (spray, splash from ocean, lake, pond or river);
- O. exceeding maximum design wind load as specified in ICC ESR-1627;
- P. other unusual or unreasonable conditions in the surrounding physical environment; and
- Q. any other such similar or dissimilar occurrences beyond the control of KMEW.

NOTICE: DAMAGE CAUSED BY ANY PRODUCT INSTALLATION, REPAIR, OR REPLACEMENT THAT IS NOT IN ACCORDANCE WITH THE CERACLAD INSTALLATION MANUAL, AS WELL AS DAMAGE CAUSED BY PRODUCT INSTALLATION ON INAPPROPRIATE BUILDINGS/STRUCTURES, IS HEREBY SPECIFICALLY EXCLUDED FROM WARRANTY COVERAGE. PLEASE REVIEW THE CERACLAD INSTALLATION MANUAL AND WEBSITE FOR THIS PRODUCT.

4. WARRANTY CONDITIONS:

KMEW's liability hereunder to the Covered Person shall also be subject to each of the following additional terms and conditions:

- A. The claimant must provide proof that he/she is a Covered Person;
- B. The CERACLAD installation manual for the proper storage, shipping, handling, installation and maintenance of the Product must have been followed at all times (failure to do so may affect Product performance and void the Warranty); and

C. UPON DISCOVERY OF A POSSIBLE COVERED PRODUCT DEFECT OR FAILURE, AND PRIOR TO MAKING ANY PERMANENT REPAIR TO THE PRODUCT, THE COVERED PERSON MUST, AT ITS OWN COST AND EXPENSE: (i) PROMPTLY PROVIDE FOR PROTECTION OF ALL PROPERTY THAT COULD BE FURTHER DAMAGED UNTIL SUCH TIME THAT THE POSSIBLE COVERED DEFECT OR FAILURE HAS BEEN REPAIRED; (ii) PROMPTLY, BUT IN NO EVENT LATER THAN THIRTY (30) DAYS AFTER DISCOVERY, PROVIDE WRITTEN NOTICE TO KMEW OF THE POSSIBLE COVERED PRODUCT DEFECT OR FAILURE (AS PROVIDED BELOW); AND (iii) ALLOW KMEW A REASONABLE PERIOD OF TIME (UP TO 25 BUSINESS DAYS AFTER NOTICE HAS BEEN RECEIVED BY KMEW) AS WELL AS PROVIDE REASONABLE ACCESS THROUGHOUT THE PROPERTY TO KMEW OR KMEW'S AGENT SO THEY CAN EXAMINE, PHOTOGRAPH AND/OR TAKE SAMPLES OF THE PRODUCT.

5. WARRANTY CLAIMS:

Claims under this Limited Warranty, must be promptly presented in writing to KMEW USA Inc., 15359 NE 90th St., Redmond, WA 98052, and must include:

- A. The address and location of the structure;
- B. Details (including photos) of the alleged defect or failure sufficient for KMEW to begin investigating the claim;
- C. Proof of owner or installer's date of purchase;
- D. The name of the owner, builder or installer; and
- E. Proof that you are a Covered Person (as defined in Section 1 above).

6. WARRANTY REMEDY:

If, after investigation, KMEW, in its sole discretion, determines that a warranted defect exists, KMEW shall do the following:

During the First Year After Purchase:

(Before Installation): Replace¹ the defective portion of the Product or reimburse Covered Person the Original Purchase Price² of the defective portion of the Product.

(After Installation): For CREATIV™ Product: Provide a quantity of coating sufficient to cover the defective portion, or reimburse the Covered Person up to \$1.00 per square foot for repair of the defective portion.

For Ceramic Product: Replace¹ the defective portion of the Product or reimburse the Covered Person for resulting losses up to the Original Purchase Price² of the defective portion of the Product.

Beyond the First Year After Purchase (whether or not installed):

For CREATIV™ Product: Reimburse the Covered Person up to \$1 per square foot for repair of the defective portion, reduced by 6.67% for each year from the original date of purchase, such that after the 15th year no warranty shall remain.

For Ceramic Product: Replace¹ the defective portion of the Product or reimburse the Covered Person up to the Original Purchase Price² of the defective portion of the Product, reduced by 5% for each year from the original date of purchase, such that after the 20th year no warranty shall remain.

For All Other Claims under the 50 year Warranty: Replace¹ the defective portion of the Product or reimburse the Covered Person up to the Original Purchase Price² of the defective portion of the Product, reduced by 2% for each year from the original date of purchase, such that after the 50th year no warranty shall remain.

REFUND OR PRODUCT REPLACEMENT BY KMEW SHALL BE AT KMEW'S SOLE DISCRETION AND SHALL BE THE SOLE AND EXCLUSIVE REMEDY WITH RESPECT TO ANY DEFECT; AND ACCEPTANCE BY ANY COVERED PERSON SHALL CONSTITUTE A FULL SETTLEMENT AND RELEASE OF ALL CLAIMS FOR DAMAGES OR OTHER RELIEF. FOR CLAIMS INVOLVING BOTH COLOR AND OTHER DEFECTS, THE HIGHER REIMBURSEMENT RATE SHALL PREVAIL. KMEW WILL NOT REFUND OR PAY ANY COSTS IN CONNECTION WITH LABOR OR ACCESSORY MATERIALS.

¹ KMEW reserves the right to modify or to discontinue any of its products without notice and shall not be liable as a result of such modification or discontinuation. In such event, a suitable replacement product will be determined by KMEW in its sole and reasonable discretion.

² If the Original Purchase Price cannot be established by the Covered Person, it shall be determined by KMEW in its sole and reasonable discretion.

7. WARRANTY DISCLAIMER:

The statements herein constitute the only warranty extended by KMEW for the Product. KMEW DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EXCEPT WHERE PRODUCT PURCHASE IS SUBJECT TO CONSUMER PRODUCT WARRANTY LAW, OR BY USAGE OF TRADE OR COURSE OF DEALING IN WHICH INSTANCES THE DURATION OF ANY APPLICABLE WARRANTIES ARE LIMITED TO THE FIRST ELAPSE OF THE WARRANTY PERIOD PROVIDED ABOVE, OR SUCH SHORTER PERIOD AS APPLICABLE LAW PERMITS OR REQUIRES. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. IN NO EVENT WILL KMEW HAVE ANY LIABILITY FOR ANY INCIDENTAL, SPECIAL, INDIRECT, CONSEQUENTIAL OR OTHER DAMAGES (WHETHER RESULTING FROM NONDELIVERY OR FROM THE USE, MISUSE, OR INABILITY TO USE THE PRODUCT OR FROM DEFECTS IN THE PRODUCT). Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. NO OTHER WARRANTY WILL BE MADE BY THE MANUFACTURER OR THE SELLER OR BY OPERATION OF LAW OR BY USAGE OF TRADE OR COURSE OF DEALING WITH RESPECT TO THE PRODUCT OR ITS INSTALLATION, STORAGE, HANDLING, MAINTENANCE, USE, REPLACEMENT OR REPAIR. This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

8. DISPUTE RESOLUTION

Any dispute arising under this Warranty shall be resolved by arbitration conducted in King County State of Washington, United States of America pursuant to the then current rules of the American Arbitration Association, applying the laws of the State of Washington without regard to its internal conflicts of laws provisions. The award of the arbitrator shall be final and binding. Each party shall be responsible for its own legal fees and costs, as well as its equal share of any arbitrators' fees.

Notice: Please print this card for your records. For the latest warranty policy, please check the website.

Manufactured by: KMEW Co., Ltd.

13F, Crystal Tower Bldg. 1-2-27 Shiromi, Chuo-ku, Osaka 540-6013 Japan Tel: +81-6-6945-8123



Products used: Cast Stripe – Charcoal

Ctanhan A Millar

Products used: 8 Reveal – Saffron 8 Reveal – Vanilla Cast Stripe – custom color Contemporary Smooth – Slate





Products used: Contemporary Smooth - Linen Contemporary Smooth - Brass





Products used: Contemporary Smooth (acrylic) – Linen



Products used: Contemporary Smooth – Midnight Blue



Products used: Contemporary Smooth – Linen Contemporary Smooth – Slate

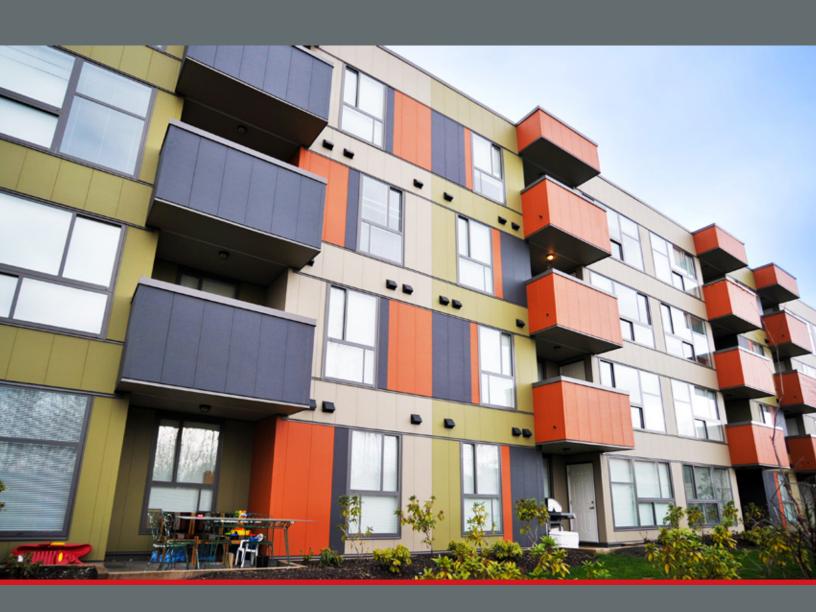




CREATIV

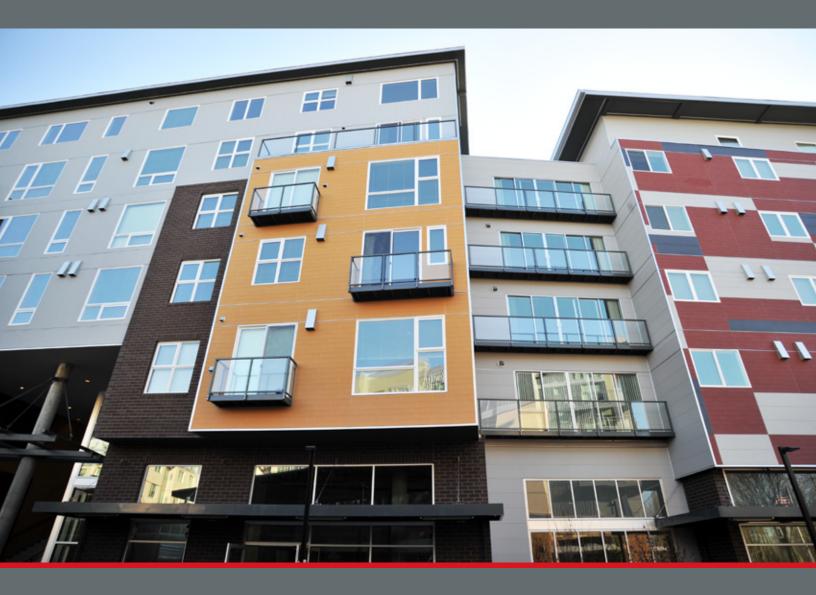
CUSTOM COLOR PROGRAM

Bringing Your Imagination to Life







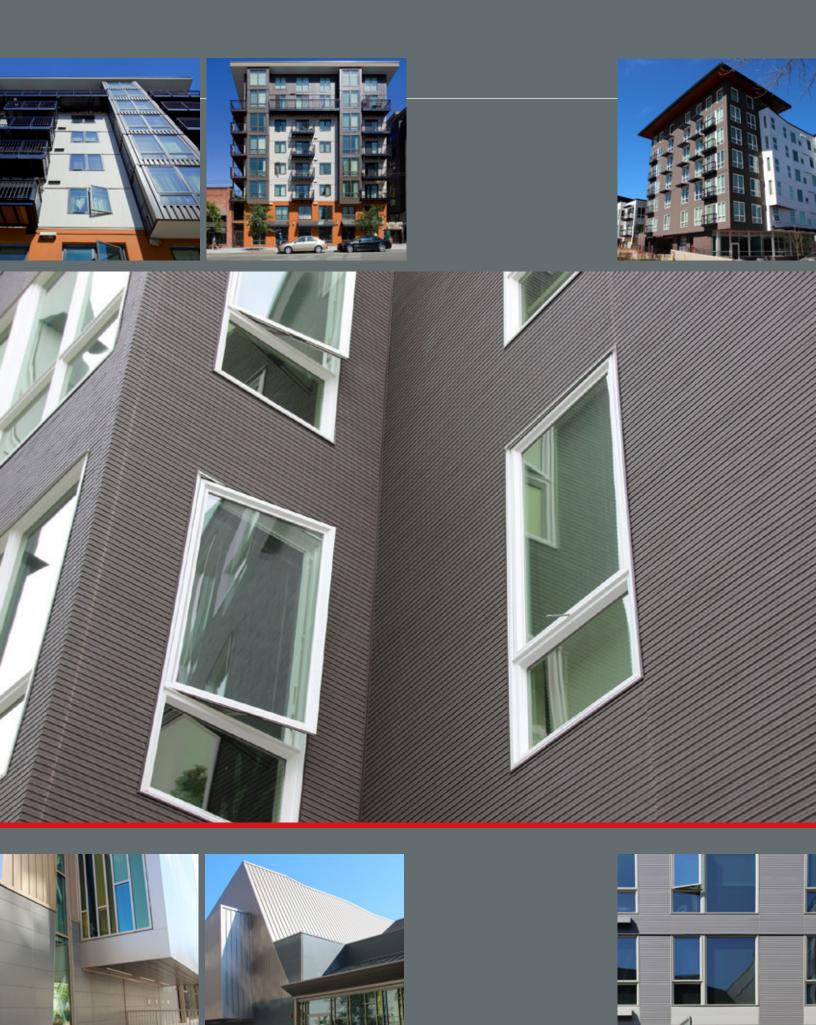














Please visit our website for additional CERACLAD product information including:

- Product samples
- Custom color samples
- Specifications
- CAD details
- Product performance & approval documents
- MSDS

www.ceraclad.com

Manufactured by: **KMEW Co., Ltd.** 13F, Crystal Tower Bldg. 1-2-27 Shiromi, Chuo-Ku, Osaka 540-6013 Japan

Represented by: **KMEW USA Inc.** 15359 NE 90th Street, Redmond, WA 98052 USA



