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[www.builtbydca.com](http://www.builtbydca.com)

DEVELOPMENT  
& CONSTRUCTION  
ASSOCIATES, LLC

Development & Construction Associates is developing and plans to construct a residence hall and campus life center for students of UW- Fox Valley. We wish to present an alternative exterior material.

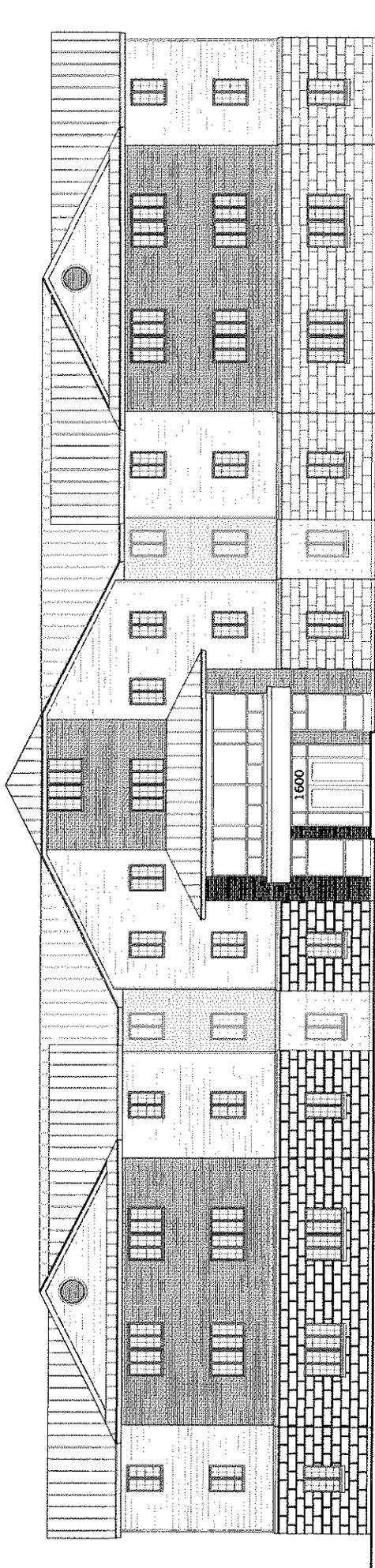
We understand that 75% of the exterior must be natural stone or brick. We wish to substitute a fiber cement product with the durability, appearance and quality equal to the standard materials.

We are seeking LEED gold certification for this project and are seeking materials and systems to support that effort. One of the major components of this fiber cement product is fly ash. Fly ash is a by-product of coal-fired power plants. In this application fly ash is considered a recycled material enhancing the project's LEED position. The product also uses post-consumer newspaper waste.

Based on the needs of UW-Fox Valley we will be on a very tight construction schedule. We estimate that installing standard masonry will take 90-100 working days. Installing the fiber cement product will shorten this to 15-20 working days.

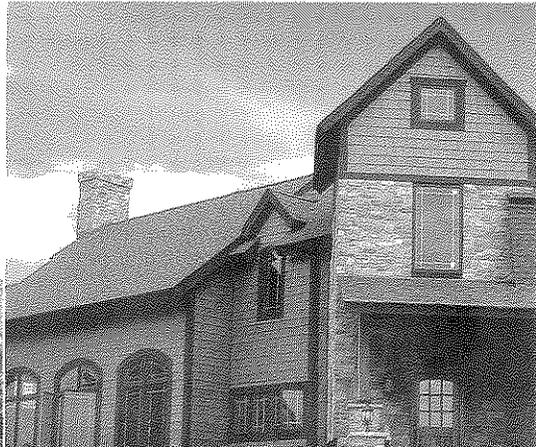
The appearance and durability of the building finished with the fiber cement alternative will be equal to the appearance of the building with standard stone or brick.

Fuddrucker's restaurant in Grand Chute was built using the same material we propose.



4 north elevation  
A-1 1/8" = 1'-0"

# Sustainable Stewardship



## Sustainable Stewardship Of Our Resources



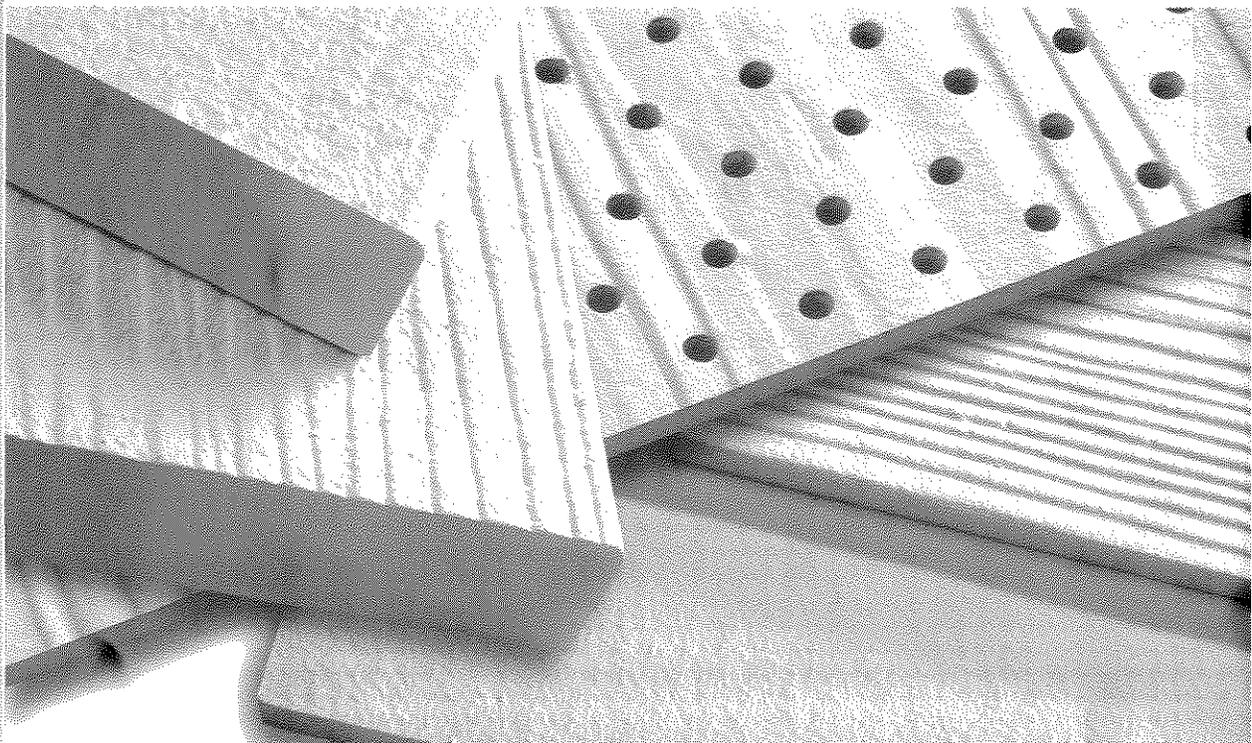
The responsible and respectful stewardship of our natural resources has always been and will always continue to be at the forefront of our corporate objectives.

At Nichiha our mission for over 50 years has been to utilize the natural resources entrusted to us with the utmost environmental diligence and which maximizes recyclability, all in an effort to *reduce our world wide impact* on the environment; while maintaining the highest product performance standards.

We have focused our efforts of minimizing our impact on the environment in every phase of manufacturing and material handling, thus reducing our energy and water usage. Nichiha is the world leader in fiber cement materials research and development, which has led us to substitute non-recyclable materials with recycled *post-consumer and post-industrial waste*.

At Nichiha, utilizing the best and latest technology to produce our fiber cement products means; that we provide a product to the construction industry, which is intrinsically *better for the environment*. Since building "Green" has emerged as one of the most important issues of the construction industry today, developing and utilizing products that are sustainable to the environment has never been more impactful.

This is the world wide environmental vision for Nichiha. We not only embrace this vision but continually seek ways to improve our processes that will further reduce our impact on the environment. Since 1956 and long before being "Green" was important, the responsible and respectful stewardship of our natural resources has always been and will always continue to be at the forefront of our corporate objectives.



# Environmental Impact

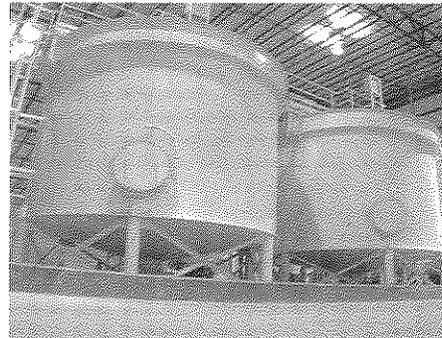
## Recycled Materials Impact

Beginning with the raw materials that make up NichiProducts™ exterior claddings, we use a combination of recycled pulp fiber, fly ash and recycled fiber cement products. By using recycled products in the manufacturing of our fiber cement exterior claddings, Nichiha supports the sustainable and conscientious use of our natural resources.

-  NichiProducts™ contain over 50% fly ash, a post-consumer waste material generated at coal-burning, electric generating facilities. Normally this material is sent to landfills, and by using fly ash in our products, the Nichiha Macon facility alone, diverts over 66,000 tons of fly ash from ending up in landfills annually.
-  Sierra Premium™ Shake and Smooth boards contain over 20% post consumer recycled materials (fly ash).
-  Panel Products Brick, Stone and Block panels contain over 20% post-consumer recycled materials (fly ash).
-  Utilizing advanced material management techniques, NichiProducts use 100% of its pre-cured fiber cement scrap.
-  Using recycled materials and regional materials resources, can contribute up to 2 LEED's credits.

## Local Impact

-  Water impact - The Nichiha manufacturing facility in Macon, GA, includes an on-site water treatment plant. This facility not only recycles 95% of the water used in the manufacturing process, it treats the 5% water discharged back into the system.
-  NichiProducts use local material resources (90% of our materials are less than 200 miles from our facility), reducing the environmental impact and carbon emissions of long-haul transportation.
-  The Macon plant releases odorless emissions totaling less than 90 tons of VOC's per year, which is within all state, federal and local regulations for outdoor air quality.



## Site Impact

-  Sierra Premium™ Shake and Smooth boards are offered pre-stained or pre-painted, eliminating on-site finishing resources and VOC's. The finish on Sierra Premium boards is backed by a 25, 15 or 12-year warranty (depending upon finish), further reducing the need for re-finishing resources (possible LEED's points - 4).
-  Using products that are termite and insect resistant contribute to the sustainability of any structure. The reduction of material replacement in addition to not contributing to a structure's maintenance, aids in environmental impact reduction. All Nichiha fiber cement exterior claddings are termite and insect resistant.



Using fly ash not only affords a green product for the environment, it improves our products performance characteristics.

Nichiha uses 100% of its pre-cured fiber cement scrap.

"Nichiha is committed to social responsibility and makes every effort to reduce its carbon footprint by instituting ecologically-minded manufacturing techniques," states Darrin Haugan, senior vice president of sales and marketing for Nichiha. "A highlight of our effort can be seen in the engineering of our on-site water treatment and reuse system that enables our plant to recycle 95 percent of all water used in the manufacturing process."

# Nichiha Fiber Cement Exterior Cladding Building Credits

## Lead Credit

Recycled Content 10% (credit 4.1): Use material with recycled content that constitutes at least 10% (based on cost) of total value of material in project. Possible Points: 1  
*Nichiha fiber cement exterior claddings can contribute to these credits.*

Recycled Content 20% (credit 4.2): Use materials with recycled content that constitutes at least 20% (based on cost) of total value of materials in project. Possible Points: 1  
*Nichiha fiber cement exterior claddings can contribute to these credits.*

Regional Materials 10% (credit 5.1): Use building materials/products that have been extracted, harvested or recovered as well as manufactured within 500 miles of project site for a minimum of 10% (based on cost) of the total materials. Possible Points: 1  
*Nichiha fiber cement exterior claddings can contribute to these credits dependant upon project site.*

Regional Materials 20% (credit 5.1): Use building materials/products that have been extracted, harvested or recovered as well as manufactured within 500 miles of project site for a minimum of 10% (based on cost) of the total materials. Possible Points: 1  
*Nichiha fiber cement exterior claddings can contribute to these credits dependant upon project site.*

## NAAB Green Home Building Guidelines

No Additional Finish (2.1.5): Using materials that require no additional finish resources to complete application on site. Possible Points: 4  
*Nichiha Sierra Premium™ Shake boards can apply.*

Termite Resistance (2.2.8): Use termite resistant materials for walls, floor joists, trusses, exterior decks and other exterior wood in regions known to be termite infested. Possible Points: 7  
*All Nichiha fiber cement exterior claddings apply.*

Recycled Content (2.4.1): Use at least 2 recycled-content materials for 3 points. Each additional material will add a point in addition to the three. Possible Points: 3-6  
*All Nichiha fiber cement exterior claddings apply.*

Resource-Efficient Material (2.7.1): Use products that contain fewer resources than traditional products. A project must use resource-efficient materials or at least 2 different types of components to receive the 3 points. Possible Points: 3  
*All Nichiha fiber cement exterior claddings apply.*

Local Availability (2.8.1): Use at least 1 type of locally available, indigenous material in the project construction to obtain 3 points. Possible Points: 3  
*NichiProducts™ cement exterior claddings apply.*



Fiber Cement At Its Best™

Nichiha USA, Inc.

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Suite AA  
Norcross, GA 30092

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770-805-9467 fax  
nichiha.com

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# CUTSTONE™ I & II







# Brick Panels



# Brick Panels



VINTAGE BRICK® - Alexandria Buff

## The Value of Integration

### The Value of Design Flexibility

- Commercial and residential builders, contractors and architects have already realized the tremendous design flexibility characteristics of Nichiha brick, stone and block panel products.
- The value of design flexibility with over thirty colors and textures and a variety of application solutions.
- Panels are completely compatible with a variety of trim products:
  - NichiTrim™ fiber cement trim boards.
  - Nichiha Accents™ Metal Trim: available in six profiles and in chrome, aluminum and any color, either Kynar or Polyester powder coated.
  - Nichiha Pre-Mitered Corners, available in all brick, stone and block textures.
  - Vinyl, wood and PVC trim.

### The Value of Green Sustainability

- The value of offering a green product that applies to LEED's credits.
- Nichiha fiber cement products are recognized as green product for their sustainability characteristics.
- For over 50 years, our mission has been to utilize our natural resources with the utmost environmental diligence and to reduce our world wide impact on the environment.
- Nichiha fiber cement products contain recycled post-consumer and post-industrial waste material, creating products that are better for the environment.

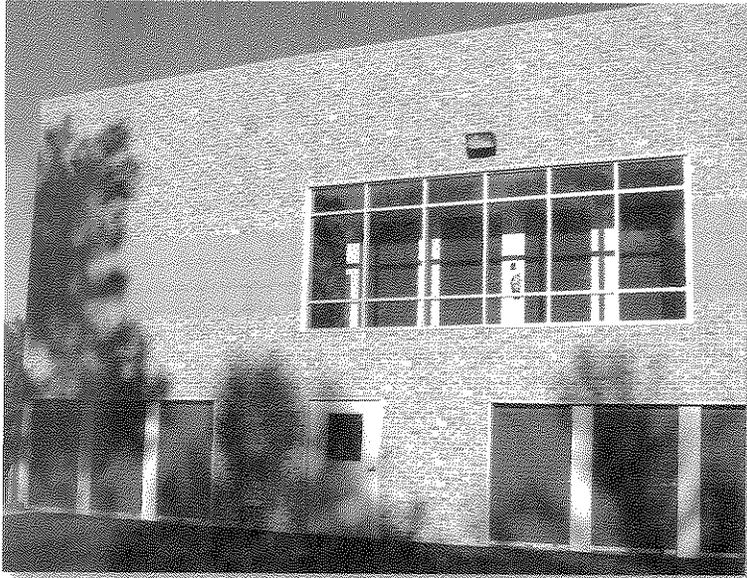
# Brick Panels



Newport Brick® - Red-Buff



Newport Brick® - Red-Red



Vintage Brick® - White Wash



Newport Brick® - Red-Buff

## Discover The Difference of Nichiha

### The Value of Performance

- Multi-layered coating process creates a lasting finish.
- Panels are ship-lapped on four sides for a tight fit and seamless appearance.
- Panels will not crack, rot or delaminate and are resistant to fungus and termite infestation.
- Nichiha fiber cement panel products withstand extreme weather conditions.
- Brick, Stone and Block panels are backed by a 50-year limited panel warranty\* and a 15-year limited finish warranty.\*

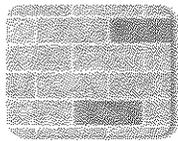
### The Value of Lower Installed Costs

- Nichiha panels offer lower installed costs over traditional materials.
- The Nichiha patented clip installation system requires no special tools or special labor.
- The clip system creates a pocket of air between panels and substrate, reducing moisture build up and enhancing the integrity of the substrate.

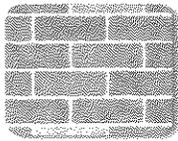
Please visit [nichiha.com/installation](http://nichiha.com/installation) for the most up-to-date and complete illustrated installation, repair, maintenance and cleaning guidelines for all Nichiha products. For a free copy of installation guidelines, contact your local dealer, or call Nichiha toll free at 1.866.424.421.

# Brick Panels

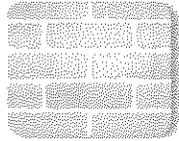
## CamelBrick



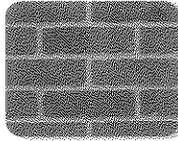
Amber Wheat



Burnt Copper



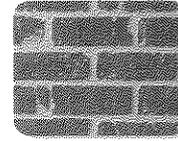
Beige-Sand



Red-Bruff



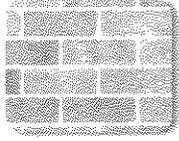
Red-Red



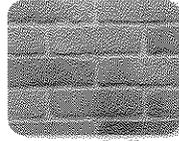
Alexandria Bruff



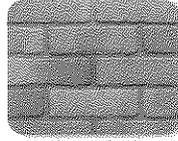
Rustic Autumn



Shale Brown



Rose-Bruff



Rose-Red



White Wash

## Product Specifications

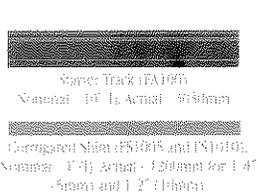
## CamelBrick

## NewportBrick

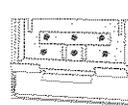
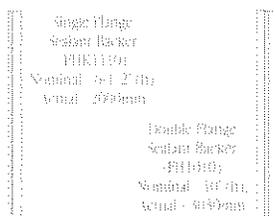
## VincentBrick

Dimensions:	Nominal 18" [h] x 6' [l] Actual 455mm [h] x 1,818mm [l]	Nominal 18" [h] x 6' [l] Actual 467mm [h] x 1,829mm [l]	Nominal 18" [h] x 6' [l] Actual 455mm [h] x 1,818mm [l]
Thickness:	Nominal 5/8", Actual 16mm	Nominal 3/4", Actual 18mm	Nominal 3/4", Actual 18mm
Weight (lbs. per panel):	32 lbs. per panel	40.9 lbs. per panel	40.8 lbs. per panel
Weight (lbs. per sq. ft.):	3.6 lbs. per sq. ft.	4.5 lbs. per sq. ft.	4.5 lbs. per sq. ft.
Coverage (sq. ft. per panel):	9 sq. ft. per panel	9 sq. ft. per panel	9 sq. ft. per panel
Exposed Coverage (sq. ft. per panel):	9 sq. ft. per panel	9 sq. ft. per panel	9 sq. ft. per panel
Packaging (pieces per bundle):	2 panels per pack [18 sq. ft.]	2 panels per pack [18 sq. ft.]	2 panels per pack [18 sq. ft.]

## Brick, Stone and Block Panel Installation Accessories



Corner  
Nominal - 18" [h],  
Square Bruff - 30.5 [h],  
1" returns,  
in 90th sides,  
Actual - 45.5mm  
Square Bruff - 30.5mm,  
20mm returns  
for 5.8", 5.4"  
and 1"



Short Bruff Clip  
(JH60 and JH550)  
Nominal - 2" [h] [h]  
Actual - 7.0mm [h]  
for 3.4", 7.8", 1" and 5.8"



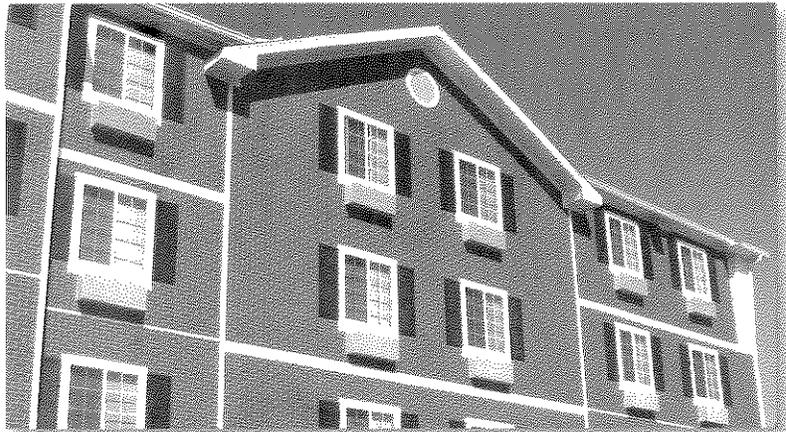
Short Joint Clip  
(JH107 and JH105)  
Nominal - 3/4" [h],  
Actual - 8.0mm [h] for  
3.4", 7.8", 1" and 5.8"



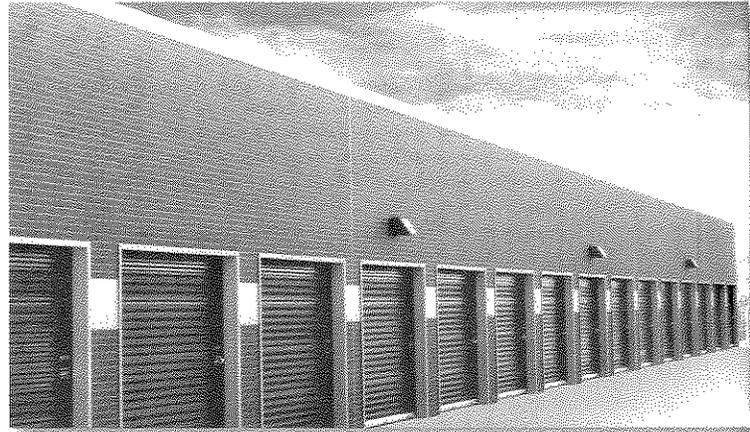
Long Joint Clip  
(JH151 and JH151)  
Nominal - 2" [h]  
Actual - 65.0mm [h] for  
3.4", 7.8", 1" and 5.8"



Corner Clip  
(JH1507 and JH1509)  
Nominal - 1 1/4" [h],  
Actual - 45mm  
returns on 90th sides  
for 3.4", 7.8", 1" and 5.8"



NewportBrick - Red-Bruff



NewportBrick - Red-Bruff

**Silica Dust Warning:** This product contains crystalline silica. Silica dust may be harmful to your health. Avoid breathing dust or contact with eyes. Use proper safety practices. For more information, visit [nichiha.com](http://www.nichiha.com).

**California Proposition 65:** This product contains chemicals known to the State of California to cause cancer or reproductive harm. For more information, visit [nichiha.com](http://www.nichiha.com).

**Environmental Information:** This product is made from recycled materials. For more information, visit [nichiha.com](http://www.nichiha.com).

**Recycling Information:** This product is made from recycled materials. For more information, visit [nichiha.com](http://www.nichiha.com).

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**Weight:** This product is made from recycled materials. For more information, visit [nichiha.com](http://www.nichiha.com).

**Installation:** This product is made from recycled materials. For more information, visit [nichiha.com](http://www.nichiha.com).

**Warranty:** This product is made from recycled materials. For more information, visit [nichiha.com](http://www.nichiha.com).



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