

## 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 fore-front 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 55% fly ash, a post-industrial waste material generated at coal-burning, electric generating facilities. Normally this material is sent to landfills, and by using fly ash in our products, Nichiha diverts over 66,000 tons of fly ash from ending up in landfills annually.



Using fly ash not only affords a greener product for the environment, it improves our products performance characteristics; allowing for a stronger more durable exterior cladding that is easier to handle and install.



Pulp is also a material used in the composition of NichiProducts. Nichiha uses over 3,000 tons annually of post-consumer newspaper waste that would normally end up in landfills.



Utilizing advanced material management techniques, NichiProducts use 100% of its precured fiber cement scrap.

Using recycled materials and regional materials resources, can contribute up to 2 LEED's credits.



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<sup>™</sup> Shake boards are offered pre-stained or pre-painted, eliminating on-site finishing resources and VOC's. The finish on Sierra Premium Shake boards is backed by a 15-year warranty, 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

#### Leed Credit

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

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

<u>Regional Materials 10% (credit 5.1)</u>: 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 *Nichiba fiber cement exterior claddings can contribute to these credits dependant upon project site.* 

<u>Regional Materials 20% (credit 5.1)</u>: 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 *Nichiba fiber cement exterior claddings can contribute to these credits dependant upon project site.* 

### **NAHB 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 Nichiba Sierra Premium<sup>™</sup> Shake boards can apply.

<u>Termite Resistance (2.2.8)</u>: 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 Nichiba fiber cement exterior claddings apply.* 

<u>Recycled Content (2.4.1)</u>: 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 Nichiba fiber cement exterior claddings apply.* 

<u>Resource-Efficient Material (2.7.1)</u>: 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 Nichiba 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<sup>™</sup> cement exterior claddings apply.



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