


Calcium Silicate Board

ECOLUX™



Not all boards are made the same for resource conservation and environmental preservation.



ECOLUX™ is an investment in the planet's future.

“Ecology & Quality” is the new concept of the calcium silicate boards of the future.



ECOLUX™ ushers in a new era of environment
friendliness and high performance.

CONTENTS

Features	3
Applications	4
Specifications and physical properties	5
Installation methods	6~8
Prohibitions and cautions	9

An environmentally friendly product that made with recycled materials.

Class "0" in accordance with
BS476: Parts 6 & 7



Features



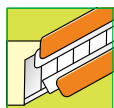
Non-combustible material



Excellent dimensional stability



Excellent water resistance



**Ease of processing,
excellent workability**



Excellent impact resistance



Formaldehyde free

Formaldehyde is not used in production process.

* ECOLUX is a trademark of NICHIAS Corporation.

Applications

Used in a wide range of applications as a noncombustible building material for ceilings and walls.

- Interior (ceiling and wall lining) for offices, shops, factories, condominiums, hospitals and other building.
- Suitable for ceilings and walls in areas exposed to water, such as kitchens, office kitchenettes and restrooms.
- Ceilings of parking space



Main entrance / lobby



Pilotis



Parking space



Shop ceiling




Balcony / eaves soffit

*Not suitable for areas exposed to freezing temperatures.

*Painting, sealing or a similar treatment is required to prevent water from entering the boards.

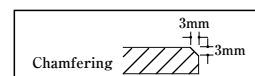
Specifications


Three types of ECOLUX™ boards are available: plain boards, perforated plain boards and embossed boards.

Product name		Thickness (mm)	Tolerance (mm)	Width×length (mm)	Tolerance (mm)
	ECOLUX™ Flat Board	6	±0.4	910×910 910×1820	+0 -2
		8			
		10°	±0.5		
		12°			

* For inquiries about sizes other than those above, please contact us.

* Nichias also offers chamfering. The beveling is C3. (C3 means cutting out a 3 mm-long isosceles right-angled triangle)

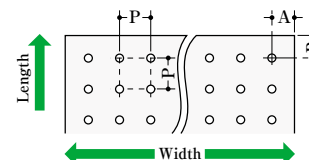



Product name		Thickness (mm)	Tolerance (mm)	Width×length (mm)	Tolerance (mm)	Hole diameter and pitch (P) (mm)	Number of holes	Hole-to-edge distance (A×B) (mm)
	ECOLUX™ Perforated Boards	6, 8	±0.4	910×910	+0 -2	6φ-20 (Open area 6.9%)	45×45	15×15
				910×1820			45×90	15×20

* ECOLUX™ Perforated Boards are custom ordered. Please contact us for information about the delivery time and available quantity before placing your order.

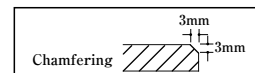
* It can be made at a thickness of 10 mm or 12 mm.

* The non-flammable certification number of the ECOLUX™ Pierced Board is NM-2988.
It is not certified on its own, but is certified with the pierced board and lining material (non-flammable material (excluding metal plate)).



Product name		Thickness (mm)	Tolerance (mm)	Dimensions (width × length) (mm)	Tolerance (mm)
	ECOLUX™ Embossed Boards	6	±0.4	910×910 910×1820	+0 -2

* Nichias also offers chamfering. The beveling is C3. (C3 means cutting out a 3 mm-long isosceles right-angled triangle)



Standard physical properties (ECOLUX™ Plain Boards)

	Density (g/cm³)	Bending strength (longitudinal) (N/mm²)	Modulus of Elasticity (longitudinal)×10³ (N/mm²)	Water absorption rate (wt%)	Linear shrinkage (water saturated→60°C dry) (longitudinal) (%)
Measured value	0.8	12.7	5.8	65	0.10
Standard value	0.7 to 0.9	10.0 or more	—	—	0.15 or less

* The above data indicates the standard physical properties of a 6-mm-thick plain board product measuring 910 × 1820 mm.

* The above figures are measured by NICHIA Corporation, not guaranteed values.

Installation methods

1 Fixing methods

ECOLUX™ can be easily fixed directly to the substrate by using nails or tapping screws (self-tapping). The boards can be stapled to underlayer board substrates such as ECOLUX™ and gypsum boards in combination with adhesive, which reduces the construction period.

The ECOLUX™ boards can also be easily cut with an electric circular saw, slate saw or board cutter.



(1) Nailing

- Nail a board to well-dried, smooth timber stud or substrate, intervals determined by the board thickness and application area. (Refer to “2. Fixing pitch and substrate interval” on page 7.)
- Use plated JIS A 5508 (round wire nails), stainless steel nails. The nail length should be about 2.5 to 3 times longer than the board thickness.



(2) Screwing

- Screw a board to a smooth steel stud or substrate, at intervals determined by the board thickness and application area. (Refer to “2. Fixing pitch and substrate interval” on page 7.)
- Use plated JIS B 1122 (cross-recessed head tapping screws). The screw length should be approx. 10 to 20 mm longer than the board thickness.
- 6-mm and 8-mm-thick boards can be self-tapping screwed.



(3) Stapling

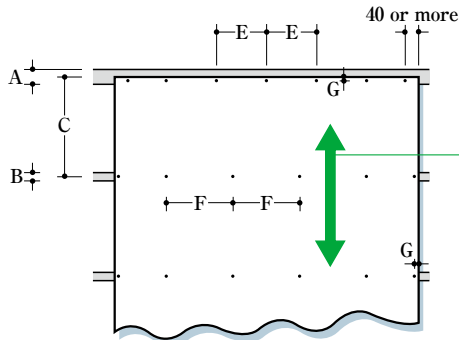
- ECOLUX™ boards can be stapled on underlayer ECOLUX™ boards and gypsum boards as an adhesive is also used.

Unit: mm

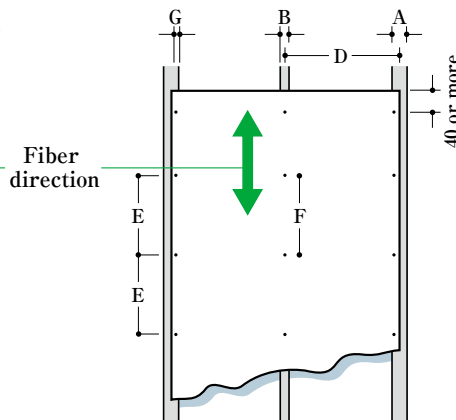
Standard fixing according to board thickness	Fixing metal	Nail	Tapping screws	Staples
	Board thickness			
	6	N22 or more	3 ϕ ×20 or more	4 × 19 (419) or more
	8	N25 or more	3.5 ϕ ×22 or more	4 × 22 (422) or more
	10	N32 or more	3.5 ϕ ×22 or more	4 × 22 (422) or more
	12	N32 or more	3.5 ϕ ×25 or more	4 × 25 (425) or more

2 Fixing pitch and substrate interval

■ The fiber direction of the board must be perpendicular to the substrate.
Application areas: Ceiling and interior walls



■ The fiber direction of the board must be parallel to the substrate.
Application areas: Interior walls



(Notes)

● The fiber direction of the board must be perpendicular to the substrate for ceiling installation.
(The fiber direction is indicated by arrows marked on the underside of the board.)

● For the board joints, use the substrate or joiners.

● Use galvanized fixing metal

● Finish the substrate surface so that it is flat with no unevenness.

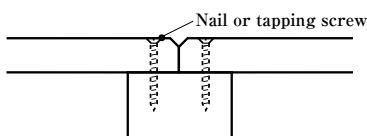
● For standard interior walls, a double-layered board structure is required.

Unit: mm

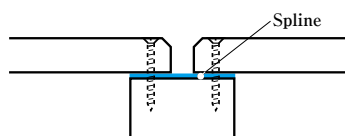
Standard specification of fixing pitch and intervals	Application area	Board thickness	Substrate width		Substrate interval		Fixing pitch		
			A	B	C	D	E	F	G
	Ceiling	6	45 or more	25 or more	303 or less	—	150 or less	200 or less	15 or more (40 or more at corners)
		8							
	Interior wall	6, 8	45 or more	40 or more	303 or less	303 or less	300 or less	300 or less	15 or more (40 or more at corners)
		10, 12			455 or less	455 or less			

Joint treatment

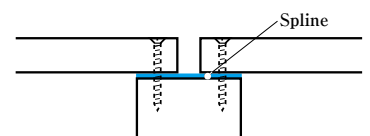
[Beveled edge butt joint]



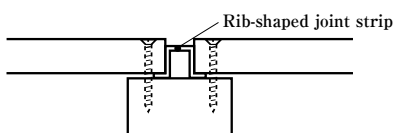
[Beveled edge groove joint with exposed spline]



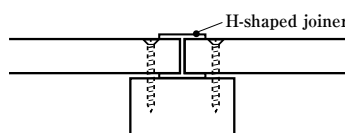
[Square edge groove joint with exposed spline]



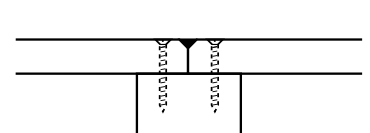
[Joiner]



[Joiner]



[Beveled edge concealed joint]



Standard finishing method

ECOLUX™ can be bonded to many other types of materials, but it is necessary to use the correct procedure for the type of materials, as shown below.

1 Bonding

(1) ECOLUX™ to wallpaper, cloth	Work sequence	Specifications
	1. Surface preparation	●Remove dust and dirt from the surface.
	2. Sealer treatment	●Coat the entire surface with sealer as per the manufacturer's instructions.
	3. Adhesive applications	●For more details, refer to the manufacturer's specifications.

(2) ECOLUX™ to tiles (indoors)	Work sequence	Specifications
	1. Surface preparation	●Remove dust and dirt from the surface.
	2. Sealer treatment	●Coat the entire surface with sealer as per the manufacturer's instructions.
	3. Adhesive application	●Apply the manufacturer-specified adhesive in the specified quantity using a metal spatula.
	4. Tiling	●Pressure-bond tiles immediately.
	5. Joint grouting	●Fill the joints after the adhesive is cured.

*For more details, please contact the adhesive manufacturer.

2 Painting Paint ECOLUX™ as follows:

Paint for general interior materials	Work sequence	Specifications
	1. Surface preparation	●Remove dust and dirt from the surface.
	2. Sealer treatment	●Coat the entire surface with sealer as per the manufacturer's instructions.
	3. Top coating	●Apply an overcoat of emulsion paint, such as EP and AEP.

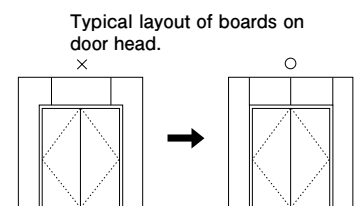
*For more details, please contact the paint manufacturer.

⊘ Prohibitions

- * Do not use this product for any purpose other than the specified uses.
- * Do not place any heavy objects on the product and do not stand on the product.
- * Do not drag the product or apply excessive impact to it, as there is a risk of damaging the product.
- * Do not use the product in an area exposed to freezing temperatures.
- * Do not use the product in a humid environment such as a bathroom or sauna, or in any area where the product might absorb water or in an area exposed to rainwater.
- * Do not use ECOLUX™ near high-temperature heat sources such as boiler equipment, as there is a risk of the product cracking.

⚠ Cautions

- * Although the product surface may appear shaded under oblique or external lighting, this has no effect on the quality.
- * Hold the product vertically when carrying it.
- * To hoist the product, use a protection board to prevent damage from the ropes.
- * Be careful not to chip off a corner or cause any other damage to the product during loading and unloading.
- * Do not stack the product higher than one meter, and use an underlay plate or pallet on the bottom of the stack.
- * Paint or seal the product to prevent water from entering the board.
- * For storage, avoid exposure to wind, rain and direct sunlight, and place the product horizontally on a pallet or on a flat and rigid surface indoors, not directly on the ground. Cover the product with protective sheets.
- * When disposing of ECOLUX™, comply with your local regulations concerning industrial waste.
- * Refer to this catalog to ensure proper handling of the product.
- * When cutting the product with an electric power tool, be sure to use a dust collector and wear a dust respirator, dust-proof glasses or other appropriate protective equipment.
- * When cutting the product with a saw, utility knife, file or other manual tools, wear a dust respirator or other appropriate protective equipment.
- * Remove dust on working clothes, glove, goggle and so on, carefully so that dust does not scatter all around.
- * Wash hands and mouth thoroughly after handling.
- * Store products indoor at ambient temperature and humidity, and strictly avoid to get wet.
- * For installation on doors or other openings, provide ECOLUX™ with joints. Do not cut out the product as this will cause cracks. (See the illustration on the right.)
- * When using masking tape, select the tape made of paper for building painting (interior finishing), which is not very sticky. To remove the tape, slowly peel it off in the opposite direction (by 180 degrees). Do not leave the tape on the board for many hours.
- * Lay out the boards so that their joints can be placed on the substrate.
- * Movement of the building structure or deformation of the building frame due to seismic force may induce cracking in ECOLUX™. Take such measures as installing expansion joints so that the building structure deformation force will not reach the ECOLUX™ boards.
- * For installation, be sure to fasten the product to the substrate.
- * For installation on a ceiling, place the fiber direction of the board perpendicular to the substrate.
- * Finish the surface of the lining material so that it is flat and even.
- * Do not tighten screws more than necessary.
- * Rubbing the surface of ECOLUX™ with a board may cause it to become shiny. Handle it with care.
- * When installing the product where the ceiling furring and board are constantly exposed to heat, fasten the board to the substrate taking into consideration movement of the substrate in response to the heat (by such means as drilling pilot holes).
- * When installing the product on an inner wall, install double panels as a standard. Do not finish it by installing single 6-mm-thick boards.
- * When the product is sprayed with paint, it may have conspicuous fuzz due to the nature of the product. Perform surface treatment as required.
- * When installing the product on a ceiling that is not a suspended ceiling, there is a risk of the product cracking.
- * When using the product as backing boards for the rock wool decorative acoustic boards in a room with an indoor swimming pool, calcium silicate boards used as backing boards may be affected if a large amount of condensation is generated in a space in the ceiling (on a structural frame, MEP equipment or wall) and/or on the ceiling surface. This may be one of the reasons for the ceiling material falling off.





■ Head Office

6-1, Hatchobori 1-chome, Chuo-ku, Tokyo 104-8555, Japan
International Marketing and Sales Group
 Phone: 81-3-4413-1132 Fax: 81-3-3552-6108
 Web Site: <https://www.nichias.co.jp/>

■ Overseas Sales Companies

Indonesia

PT. NICHIAS SUNIJAYA

Sequis Tower Level 19 Suite 1&2,
 Jl. Jend Sudirman Kav. 71, Jakarta 12190, Indonesia
 Phone: +62-21- 2277-6101 Fax: +62-21- 2793-8033

Malaysia

NICHIAS SOUTHEAST ASIA SDN. BHD.

Suite A1102, 11th Floor, West Wing, Wisma Consplant 2,
 No. 7, Jalan SS 16/1, 47500 Subang Jaya, Selangor Darul Ehsan, Malaysia.
 Phone: +60-3-5636-4067 Fax: +60-3-5636-4078

Singapore

NICHIAS SINGAPORE PTE. LTD.

25 International Business Park, #01-15/17 German Centre,
 Singapore 609916
 Phone: +65-6571-0830/0838 Fax: +65-6265-7681

Vietnam

NICHIAS VIETNAM CO., LTD

Room 709, Elite Business Center, 7th Floor Diamond Flower Building,
 48 Le Van Luong Street, Nhan Chinh Ward, Thanh Xuan District,
 Hanoi, Vietnam
 Phone: + 84-24-6664-3136 Fax: + 84-24-6666-8168

Thailand

NICHIAS (THAILAND) CO., LTD.

85 Moo 1, Wellgrow Industrial Estate T. Homsin, A. Bangpakong
 Chachoengsao 24180, Thailand
 Phone: +66-38-570-600 Fax: +66-38-570-601

THAI NICHIAS INTERNATIONAL CO., LTD.

Unit 1107, 11th Floor, AIA Capital Center
 89 Ratchadaphisek Road, Dindaeng, Dindaeng, Bangkok 10400 Thailand
 Phone: +66-2-001-2060 Fax: +66-2-001-2062

China

NICHIAS (SHANGHAI) TRADING CO., LTD.

宽佳斯（上海）贸易有限公司
 Room 1701, THE PLACE, Tower A, No. 100 Zun Yi Road,
 Changning District, Shanghai, P.R.China Postcode 200051
 中国上海市长宁区遵义路100号虹桥南丰城A栋1701室 邮编200051
 Phone: +86-21-6236-1783 Fax: +86-21-6236-1781

NICHIAS (SHANGHAI) TRADING CO., LTD. Guangzhou Branch

宽佳斯（上海）贸易有限公司 广州分公司
 17F-G, Gold Sun Building, No.109 Tiyu West Road, Guangzhou,
 Guang Dong Province, 510620, P.R.China
 中国广东省广州市天河区体育西路109号高盛大厦17楼G室 邮编 510620
 Phone: +86-20-3879-1640 Fax: +86-20-3879-1647

NICHIAS (SHANGHAI) AUTOPARTS TRADING CO., LTD.

宽佳斯（上海）汽车零部件贸易有限公司
 Room 1702, THE PLACE, Tower A, No. 100 Zun Yi Road,
 Changning District, Shanghai, P.R.China Postcode 200051
 中国上海市长宁区遵义路100号虹桥南丰城A栋1702室 邮编200051
 Phone: +86-21-6236-2668 Fax: +86-21-6236-2667

■ Overseas Construction Companies

Malaysia

NICHIAS SOUTHEAST ASIA SDN. BHD.

Suite A1102, 11th Floor, West Wing, Wisma Consplant 2,
 No. 7, Jalan SS 16/1, 47500 Subang Jaya, Selangor Darul Ehsan, Malaysia.
 Phone: +60-3-5636-4067 Fax: +60-3-5636-4078

Thailand

THAI-NICHIAS ENGINEERING CO., LTD.

45 Huaypong-Nongbon Road, Huaypong, Muang Rayong,
 Rayong Province 21150, Thailand
 Phone: +66-38-682-242 Fax: +66-38-691-156

■ Overseas Factories

Indonesia

PT. NICHIAS ROCKWOOL INDONESIA

PT. NICHIAS METALWORKS INDONESIA

Malaysia

NICHIAS FGS SDN. BHD.

NT RUBBER-SEALS SDN. BHD.

Vietnam

NICHIAS HAIPHONG CO., LTD.

China

SUZHOU NICHIAS INDUSTRIAL PRODUCTS CO., LTD.

(苏州宽佳斯工业制品有限公司)

SUZHOU NICHIAS SEAL MATERIAL CO., LTD.

(苏州宽佳斯密封材料有限公司)

SHANGHAI XINGSHENG GASKET CO., LTD.

(上海兴盛密封垫有限公司)

SUZHOU SHUANGYOU AUTOPARTS CO., LTD.

(苏州双友汽车零部件有限公司)

India

NICHIAS INDUSTRIAL PRODUCTS PRIVATE LTD.

Czech

NICHIAS AUTOPARTS EUROPE a.s.

Mexico

NAX MFG, S.A.DE C.V.

⚠ Cautions

- The products included in this catalog are intended for common use, including those presented in the catalog. If you intend to use any of the products in a way that requires extremely high quality and reliability such that any possible defect may directly affect the safety of human lives, please make sure to consult with our company in advance and take necessary measures at your responsibility.
- Because the stated material values may vary according to actual usage environments or circumstances, please consider such figures as indications for reference.
- The content of the catalog explains the features of the products when they are used alone. When actually using the products, please start using them after testing them under the actual usage environment.
- The content of the explanation of the products may be modified without any advance notice, and the production of the product may also be discontinued without advance notice. Please obtain the latest version of the catalog, and confirm the content thereof. The date of issuance of this catalog is printed on this page.
- The standards, accreditation and provisions of laws included in the catalog may not conform with the latest version thereof.
- We strictly prohibit any acts of infringement upon our rights that are protected by the Copyright Act with regard to information included in the catalog, through the production of copies or imitations, misappropriation or unauthorized reprinting.
- Please be informed that, in the case where any problem involving a third party's industrial property right arises due to the use of any product included in the catalog, our company shall not be responsible for any problems other than the problems arising strictly due to reasons related to only such products.
- Please be aware that our company will not bear any responsibility for the following damage related to our products:
 - Damage arising due to natural disasters or accidents occurring for reasons that are not attributable to our company;
 - Damage arising due to remodeling, repairing or other acts by a third party;
 - Damage arising due to the willful intent or negligence of the customer or the user, or due to the improper use or use under abnormal conditions of the products;
 - Damage arising due to the failure to carry out regular checkups and appropriate repairs, maintenance and part replacements, considering various conditions, such as the usage conditions, usage environment and usage period, etc., of the product;
 - Indirect damage (including any operational damage, lost profits, opportunity losses, etc.) arising due to the use of or inability to use our company's product;
 - Damage arising due to a situation which was unforeseeable under the technical standards at the time of the shipment of our company's product; or
 - Damage arising due to reasons that are not attributable to our company.