

#### **Our mission:** To protect amenable social environments To protect precious lives

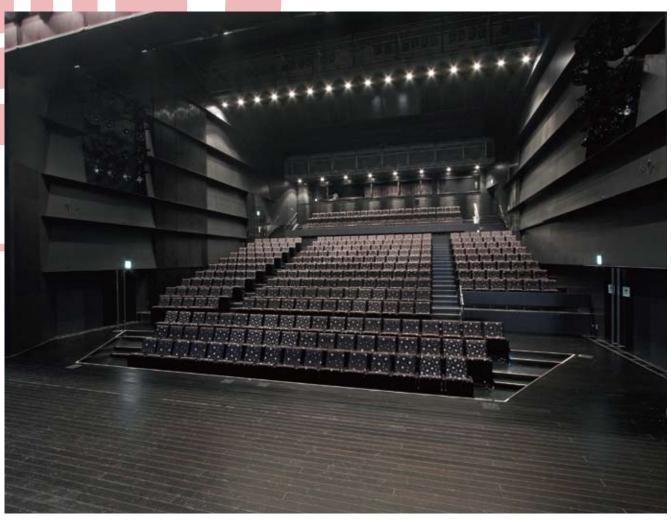


Fire, heat and sound play essential roles in our lives, but sometimes they can also become threats. A&A Materials has developed fire-resistant and noncombustible materials to protect precious lives and property from fire, and soundproof materials to keep unpleasant noise out of living spaces. By protecting buildings, we also protect lives and society itself.

Our continuing challenge is to protect amenable social environments.

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#### AAM GALLERY Our Interior Materials in Use



Mihama Culture Hall FG Board in Main Hall



Mihama Culture Hall Hiluc perforated panels in a rehearsal room



Mihama Culture Hall Hiluc perforated panels in No. 1 Studio

Exterior of Mihama Culture Hall





Osaka Mode Gakuen/HAL Osaka FG Board on spherical exterior of Main Hall



Exterior of Osaka Mode Gakuen/HAL Osaka

Osaka Mode Gakuen/HAL Osaka

Entrance Hall

Namics Technocore FG Board in 1F courtyard



Namics Technocore FG Board in 2F corridor



#### AAM GALLERY Our Interior Materials in Use



Stendo#500





Osugi Daini Elementary School, Edogawa-ku, Tokyo Stendo#500 2B, Carrara Opinion in a toilet





JA Nanao Cera-Art Ecoshiny S, Botticino in a pantry

Noshinkei Rehabili Kitaoji Hospital Stendo#1000 in Operating Room Design: Noguchi Keikaku Kanri Construction: Noguchi Construction Co., Ltd.



Noshinkei Rehabili Kitaoji Hospital Stendo#400 2B in Kitchen Design: Noguchi Keikaku Kanri Construction: Noguchi Construction Co., Ltd.



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#### AAM GALLERY Our Exterior Materials in Use





Abseiling practice

Higashi Osaka City Fire Department Guard Panels (used for abseiling practice and other activities)

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#### To ensure safety, please observe the following instructions.

#### Using our products

#### Noncombustible boards



Only use these products for the recommended purposes.



Avoid the GL method, which can cause adhesion problems and lifting, etc.



These boards are not suitable for exterior use (except Selflex and Guard Panel N) and must only be used for interior finishing.



Never store these boards in locations where they are exposed to direct sunlight, rain or high humidity.



These materials are not strong enough to support screws, etc., and should only be fastened to base materials.



Avoid the wet method with FG Board in environments where freezing could occur.



Never bend an FG Board along its short side.

#### **Design Information**

- When used in building parts that require fireproof or fire-resistant structures, they must be used in accordance with approval conditions.
- Please seek advice before using these products (including their use as underlay materials) under special conditions, such as high temperatures or humidity.
- Colors may vary between production lots.
- When using both sides of a product, please note that there are differences in color and surface conditions between upper and back surfaces.

#### Important Information about Transportation and Storage

- A Boards should be stacked on pallets or planks to prevent them coming into direct contact with the ground. If they must be stored outside temporarily, they should be covered with protective sheets.
- A These products should be handled carefully and protected from impacts or load shifting.
- A Never climb on top of the products while they are in storage.
- A For long-term storage, the products should not be left stacked on planks. They should be stacked on a flat, smooth surface, such as a pallet
- Deformation may occur if the products are stored upright.

#### Important Information about Installation

- Install the products correctly, using the standard installation method indicated.
- ⚠ When installing 910xmm910mm products, align the boards according to the arrows on the reverse side.

#### Important Information about Waste and Leftover Materials

▲ Construction industry waste must be disposed of in accordance with the of the country/region concerned.

#### Important Information about Safety

- A Refer to MSDS documentation for information about harmful substances, etc.
- Always take appropriate safety precautions when working in high locations.
- Always use dust extraction equipment when cutting materials with power tools.
- Always wear protective gear, including dust masks and goggles, when using power tools.
- ⚠ Install dust extraction equipment if tasks that generate dust are carried out in indoor locations.
- Workers should be encouraged to gargle and wash their hands after handling the products.

#### • Important Information about Noncombustible Decorative Boards



Only use these products for the recommended purposes.



These boards are not suitable for exterior use and must only be used for interior finishing.



Never store these boards in locations where they are exposed to direct sunlight, rain or high humidity.



Storage in an upright position can cause cracking in the decorative surface. Always stack the panels on a flat surface.



These materials are not strong enough to support screws, etc., and should only be fastened to base materials.



When making holes, avoid the use of tools that cause impacts, such as slate hammers.



Avoid the use of highly adhesive products, such as packaging tape, as masking tape.



Boards should never be left for long periods with masking tape applied.

#### Design Information

- A Seek advice before using these boards under special conditions, such as high temperatures or humidity.
- A Colors may vary between production lots.

#### Important Information about Handling and Storage

- A Boards should be stacked on pallets or planks to prevent them coming into direct contact with the ground. If they must be stored outside temporarily, they should be covered with protective sheets.
- ⚠ These products should be handled carefully and protected from impacts or load shifting.
- A Never climb on top of the products while they are in storage.
- A For long-term storage, the products should not be left stacked on planks. They should be stacked on a flat, smooth surface, such as a pallet.
- The protection paper on the decorative surface of the boards is slippery. Care must be taken to avoid load shifting.

#### Important Information about Waste and Leftover Materials

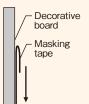
A Construction industry waste must be disposed of in accordance with the of the country/region concerned.

#### Important Information about Safety

- A Refer to MSDS documentation for information about harmful substances, etc.
- Always take appropriate safety precautions when working in high locations.
- Always use dust extraction equipment when cutting materials with power tools.
- Always wear protective gear, including dust masks and goggles, when using power tools.
- Workers should be encouraged to gargle and wash their hands after handling the products.

#### Important Information about Installation

- Masking tape should be removed slowly in the direction shown in the diagram on the right.
- Install the products correctly, according to the standard installation method indicated.
- When the sub-layer is made of calcium silicate boards, use sealer application for calcium silicate board surfaces.
- ▲ Do not install the boards with adhesive if the room temperature is below 5°C or will fall below 5°C before the adhesive sets.
- When the installation mentioned above is unavoidable, use heating or other methods to cure the adhesive.
- Use a neutral detergent to remove dirt.
- A Remove the protective film after installation (Cera-Art Series).



Prohibited action
Warning

#### Disclaimer

When preparing designs or installing products,

please be aware that no liability will be accepted in any of the following circumstances.

- 1. If problems are caused by user-prescribed specifications and installation methods, etc., that differ from the standard specifications stipulated by A&A Material Corporation
- 2. If problems are caused by user-supplied materials and parts that differ from the standard specifications
- 3. If problems result from the use of supplementary materials other than those recommended by A&A Material Corporation
- 4. If problems are caused by external factors not related to the products of A&A Material Corporation, such as deformation or aging of the building structure or ground, or external impacts
- 5. If problems occur as a result of post-delivery changes to structures or specifications, etc.
- 6. If the product is affected by soiling that would normally occur with the passage of time
- 7. If problems are caused by the use, storage or transportation, etc., of the materials in environments other than the normal conditions (temperature, humidity, air pressure, etc.) anticipated at development, manufacturing and sales stages.
- 8. If problems are caused by special factors, such as earthquakes or typhoons.

#### Noncombustible boards

FG Board
Hiluc
Hiluc M
Selflex A
Selflex
Guard Panel N
Eave Ichiban Flat
Eave Ichiban Weave

#### Curvable fiber gypsum boards

#### FG Board (Noncombustible) NM-2967



#### Create beautiful curved designs with this noncombustible board

Although gypsum-based, this revolutionary noncombustible board can be used to create curved surfaces. Flexible yet strong, it can easily be bent to follow an extremely tight curvature radius. This characteristic opens up a wide range of interior design possibilities. Other advantages include toughness and excellent sound insulation properties.

#### Standard Dimensions

Thickness	mm	4	5 6		8	10	12
Width × Length mm		910×1820	910×1820 910×2420		910×1820		
Weight	kg/m²	6.4	8.0	9.6	12.8	16.0	19.3

\* Please inquire about other dimensions.



#### **Features**

FG Boards can readily be installed using dry or wet methods according to the curvature required

#### Curvature radius

Thickness	5	6	8
Dry	800	1000	1200
	or higher	or higher	or higher
Wet	150	200	400
	or higher	or higher	or higher

- Resistant to expansion and shrinkage, this product has excellent dimensional stability and will ensure a beautiful finish
- FG Board can be processed to form curves and is as tough as flexible boards
- This product readily supports a wide range of processing methods, including cutting, planing and direct nailing
- FG Board is also a highly effective interior material in situations that require sound insulation
- FG Board has been approved by the Minister of Land, Infrastructure, Transport and Tourism as a noncombustible material

- Suitable for interior walls, partitions, ceilings, etc., in various types of buildings
- ◆Ideal for areas in which beautiful curved surfaces are required, such as ceilings, walls and columns
- Excellent for partition walls in fire-resistant structures and sound insulation structures in apartment boundary walls

#### 0.8 Calcium Silicate Boards (0.8FK)

HIUC JIS A 5430 (Noncombustible) NM-2773



#### With an established reputation for lightness and impact-resistance, the Hiluc range has set a new standard for noncombustible boards

The main materials used in these autoclave-cured interior boards are calcium silicate, limestone materials and reinforcing fibers. Designed to minimize expansion and contraction caused by moisture absorption, they provide excellent dimensional stability. Hiluc products are light, easy to process and highly resistant to impact damage. They are also suitable as base materials for decorative boards

#### Standard Dimensions

Thickness mm	5	6	8	9	10	12
Width × Length mm	910×910 910×1820 910×2420 1000×2000 1210×2420	910×2420、	910×1820 1000×2000 、910×2730	910×	1820	910×910 910×1820 910×2420 1000×2000
Weight kg/m²	4.7	5.6	7.5	8.5	9.4	11.3



#### **Features**

- Light and springy, these interior finishing materials are highly resistant to impact damage
- Hiluc products are extremely versatile and can be installed by both one shot screw fixing without pre-opening, or stapling methods
- With a thermal conductivity ratio similar to that of wood, Hiluc products provide excellent thermal insulation for added comfort
- For superior dimensional stability, these products are designed to minimize expansion and contraction resulting from moisture absorption
- Hiluc products have been approved by the Minister of Land, Infrastructure, Transport and Tourism as a noncombustible material

- ◆Suitable for a wide range of uses, including interior finishing and soffits in houses, commercial buildings and various other structures
- Ideal for fire-preventive, quasi-fireproof and fireproofing systems and sound insulation systems in apartment partition

#### 1.0 Calcium Silicate Boards (1.0 FK)

#### Hiluc M

JIS A 5430 (Noncombustible) NM-3021



#### Excellent Stability and Durability

Humidity behavior is negligible thanks to the crystallization effect of autoclave curing. As a result, these products will retain their stability and quality for many years. Unlike timber and steel, calcium silicate boards will never rot or rust.

#### **Features**

- Light and springy, these interior finishing materials are highly resistant to impact damage
- Hiluc products are extremely versatile and can be installed by both one shot screw fixing without pre-opening, or stapling methods
- With a thermal conductivity ratio similar to that of wood, Hiluc products provide excellent thermal insulation for added comfort
- For superior dimensional stability, these products are designed to minimize expansion and shrinkage resulting from moisture increase/decrease
- Hiluc M has been approved by the Minister of Land, Infrastructure, Transport and Tourism as a noncombustible material

#### Uses

- Especially suitable as high-performance base board for decorative boards
- ◆Ideal for a wide range of interior finishing uses in various types of buildings
- Ideal for fire-preventive, quasi-fireproof and fireproof structures and sound insulation structures in apartment partition walls

#### Standard Dimensions

Thickness	mm	4	6	8
Width × Lengt	h mm		910×1820	
Weight	kg/m²	4.6	6.9	9.2









#### Autoclave-Cured Cement Boards for Interior Use

#### Selflex A

(Noncombustible) NM-2695



## Manufactured with pride, these high-performance interior materials are the perfect answer for situations in which superior strength required

Selflex A products combine strength and flexibility and are extremely resistant to impact damage. To prevent warping due to aging, they are designed to minimize dimentional change by moistare. These products are also extremely versatile to support a variety of finishing and installation methods. They are manufactured with pride for use as interior and exterior board for walls, ceilings and other locations in all types of buildings.

#### **Features**

- ■These cement boards are autoclave-cured for superior strength
- Age-related deformation is extremely minimal. These products have an established reputation for dimensional stability.
- For enhanced ease of finishing, the boards are press-molded under high pressure to create smooth surfaces
- Selflex A has been approved by the Minister of Land, Infrastructure, Transport and Tourism as a noncombustible material

#### Uses

- Especially suitable as high-performance base materials for decorative boards
- ◆Ideal for a wide range of interior finishing uses in various types of buildings

#### Standard Dimensions

Thickness	mm	4	5	6
Width × Length mm		910×1820		
Weight	kg/m²	6.9	8.6	10.3

\*Please inquire about 1000×2000mm products in 5mm and 6mm thicknesses.







Flexible Boards for Interior and Exterior Finishing

Selflex

JIS A 5430 (Noncombustible) NM-2694



### These versatile products are suitable for both interior and exterior walls

Strong and flexible, these boards are highly resistant to impacts and also provide weather resistance, making them the ideal choice for a wide range of interior and exterior finishing uses. Selflex products are designed to minimize deterioration with age and provide reliable quality over many years.

#### **Features**

- High-strength flexible boards
- Excellent durability
- Superior weather resistance, even when unpainted
- Approved by the Minister of Land, Infrastructure, Transport and Tourism as a noncombustible material

#### Uses

- ◆Interior and exterior walls, soffits, etc.
- Especially suitable for interior and exterior walls in open buildings that are exposed to the external environment

#### Standard Dimensions

Thickness mm	4	5	6	8	10	12
Width × Length mm	91 91 100	0×91 0×18 0×24 00×20	20 20 000	910×1820 910×2420 1000×2000 1210×2420	910×1820 1000×2000	910×1820
Weight kg/m <sup>2</sup>	7.5	9.4	11.2	15.0	18.8	22.4



#### Flexible Panels for Exterior Finishing

#### Guard Panel N (Noncombustible) NM-2871



## Dependable protection against rain, sun and impacts

These strong, flexible panels provide a high level of performance, including strenght, flexibility and impact resistance which is always required for exterior material.

They also provide weather resistance, and deterioration with age is minimal. Guard Panel N products are the ideal materials for wide range of requirements, including external walls and noise barriers.

#### Features

- High-strength flexible boards
- Excellent durability
- Superior weather resistance, even when unpainted
- Approved by the Minister of Land, Infrastructure, Transport and Tourism as a noncombustible material

#### Uses

- Exterior wall material for all types of buildings
- Opposing walls and noise barriers in stations, etc.

#### Standard Dimensions

Thickness mm	16.5	20
Width×Length mm	910×1820、1000×2000	910×1820
Weight kg/m²	30.9	37.4

\*Please inquire about other dimensions.



#### Calcium Silicate Boards for Soffits

#### Eave Ichiban Flat (Noncombustible)

#### This thin, light, high-performance noncombustible board was designed to provide reliable fire-preventive performance as a soffit material

Enhanced fire-preventive performance is essential in soffits, which can otherwise allow fires to spread. Eave Ichiban Flat calcium silicate boards are thin, lightweight noncombustible boards specifically designed for use in soffits.

#### **Features**

- Light for easy handling
- Can be sawn, planed, nailed or fixed with wood screws in the same way as wood
- Excellent dimensional stability—minimal expansion or shrinkage resulting from humidity or temperature changes
- Reliable, long-term durability—no rotting even when wet

#### Uses

- Any soffit areas where non-combustibility is required
- ◆Soffits in houses, condominiums, warehouses, etc.
- \*Please seek advice before using this product in cold areas.

#### Standard Dimensions

Thickness	mm	5
Width × Len	ngth mm	910×1820
Weight	kg/m²	4.7



#### **Decorative Calcium Silicate Boards for Soffits**

#### **Eave Ichiban Weave** (Noncombustible) NM-8579

# These decorative soffit boards are ideal for situations that require design features as well as superior performance characteristics, such as non-combustibility and lightness

The fireproof performance of soffit materials has a major impact on overall building safety. In addition to their fireproof performance, Eave Ichiban Weave decorative calcium silicate boards are also designed to enhance the appearance of buildings with an attractive embossed wicker pattern.

#### **Features**

- Wicker pattern for a high-quality finish across the entire soffit area
- Can be sawn, planed, nailed or fixed with wood screws in the same way as wood
- Excellent dimensional stability—minimal expansion or shrinkage resulting from moisture changes
- Reliable, long-term durability—no rotting even when wet

#### Uses

- Any soffit areas where non-combustibility is required
- Soffits in houses, condominiums, warehouses, etc.
- Please seek advice before using this product in cold areas.
- ※Avoid using this product on a steel-frame base.





Vhite

#### Standard Dimensions

Thickness	mm	6
Width × Len	gth mm	910×1820
Weight	kg/m²	5.6



#### **Perforated Panels**

We can supply perforated panels by applying a perforation process to noncombustible boards. These products are suitable for use in house soffits as ventilation materials, and in interior walls and ceilings to improve sound absorption.

#### Line up

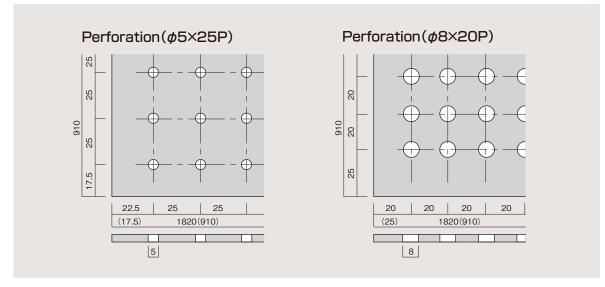
These products are available in the sizes below and with the following standard hole sizes and pitches.

Туре	Thickness mm	Width × Length mm	Diameter × Pitch mm	Perforation ratio %
FG Board	4、5、6			
Hiluc Noncombustible	5、6、8、12	910×910 910×1820	φ5×25P φ8×20P	Appox.3 Approx.12
Selflex Noncombustible	4、5、6			

<sup>\*</sup>Please inquire about other dimensions.

#### **Product Overview**

(unit:mm)





<sup>\*</sup>Perforated FG boards are not classed as noncombustible materials.

#### **Standard Properties of Noncombustible Boards**

We supply noncombustible boards with a wide range of compositions and performance characteristics, including flexible boards, calcium silicate boards and gypsum boards.

#### Properties of products covered by JIS standards

We supply flexible boards and calcium silicate boards. The physical properties of these products are controlled to comply with JIS A 5430. (see pages 20 and 21 for information about JIS A 5430.)

#### Properties of products not covered by JIS standards

We also supply a range of noncombustible boards that are not covered by JIS standards. The standard properties of these products are as shown in the table below.

		Standard Value					
Туре	Apparent density g/cm <sup>3</sup>	Bending strength N/mm <sup>2</sup> (lengthwise)	Water permeability	Length variation % (lengthwise)	Water absorption ratio %	Young's modulus kN/mm² ⟨lengthwise⟩	Thermal conductivity W/m•K
Selflex A	1.6	30	No water droplets must appear on reverse side.	0.10	25	16	0.32
Guard Panel N	1.7	30	_	0.15	17	14	0.40
FG Board	1.6	18	_	0.07	15	13	0.35
Test method	JIS A 5430	JIS A 5430	JIS A 5430	JIS A 5430	JIS A 5430	JIS A 1408	JIS A 5430

Because FG Boards are made from a gypsum-based material, test methods that do not cause crystalline water to break down are used. The JIS A 5430 test normally involves drying for 24 hours at  $105^{\circ}$ C, but with FG Boards drying is carried out for 24 hours at  $60^{\circ}$ C (or at  $40^{\circ}$ C for 24 hours in the case of a dementional movement test).

#### A&A Materials Products that Comply with JIS A 5430

#### •What is JIS?

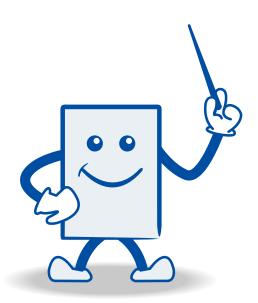
Japan Industrial Standards (JIS) are standards that define values and standards, including testing methods, that must be used to confirm types, dimensions, quality, performance and safety of products.

#### JIS Mark Labeling

The inclusion of the JIS Mark in a product's label indicates that the product has met the requirements of the JIS standard. These marks are used as indicators in various situations, such as transactions between companies and procurement by government agencies. This label allows users to check instantly whether or not a product is of reliable quality. Until October 2005, the JIS mark labeling system was based on government approval. A new JIS Mark product certification system was then introduced, under which non-governmental third-party bodies (registered certification bodies), take responsibility for certification on an integrated basis.

#### • JIS-Compliant Products Supplied by A&A Materials

We obtain certification under JIS A5430:2008 (fiber-reinforced cement boards). Representative products are shown in the table on the right. All of these products are designed to protect buildings from earthquakes and fires and are widely used as building materials that contribute to safety and comfort.



#### A&A Materials Products and JIS Categories

A&AM Product	Туре			Code	Main Uses
Selflex		Boards	Flexible boards	F	Interior and exterior finishing
Hiluc Thickness5、6、8、12mm	Calcium Silicate Boards	Type 2	0.8 Calcium Silicate Boards	0.8FK	Interior finishing
Hiluc M		Type Z	1.0 Calcium Silicate Boards	1.0FK	Interior finishing
Keikalite L		Type 3	0.2 Calcium Silicate Boards	0.2TK	Fireproof coverings
Keikalite		Type 3	0.5 Calcium Silicate Boards	0.5TK	Fireproof coverings

#### Physical properties (calcium silicate boards)

	JIS standard value					Reference value	
A&A Materials Product	Delivery testing		Format testing		neielelice value		
	Bulk density g/cm³	Bending strength N/mm²	Length variation caused by water absorption %	Thermal conductivity W/m·K	Fire-retardant or exothermic properties	Water absorption ratio %	Young's modulus kN/mm²
Hiluc	Min. 0.6 Max. 0.9	Min. 10.0	Max. 0.15	Max. 0.18		80	6
Hiluc M	Min. 0.9 Max. 1.2	Min. 13.0	IVIAX. U.15	Max. 0.24	Grade 1	60	9
Keikalite L	Min. 0.15 Max. 0.35	Min. 0.39		Max. 0.10	exothermic		
Keikalite	Min. 0.35 Max. 0.70	Min. 1.5		Max. 0.14		_	_

<sup>\*\*</sup>Delivery testing: Day-to-day testing products in continuous production to confirm that they meet the standards

<sup>%</sup> Format testing: Tests carried out when new products are manufactured, or when basic manufacturing conditions are changed

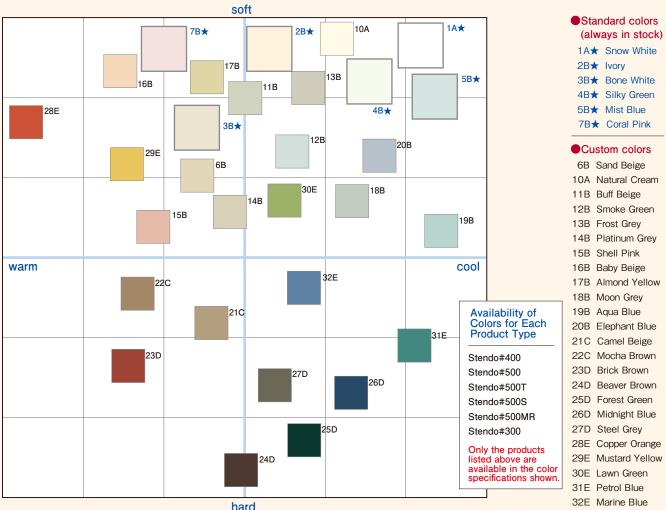
<sup>\*\*</sup>Reference values: Representative performance levels used for reference purposes—

These values are measured in-house and are not guaranteed.



#### **Stendo Series**

#### Extensive range of color variations for creative interior finishing



#### Overview

#### ♦Stendo#400

Decorative calcium silicate boards Standard products.

#### ◆Stendo#500

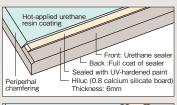
The Stendo#500 Series of calcium silicate boards are suitable for clean room use. Beside #500 as standard, this series has #500T, #500S and #500MR.

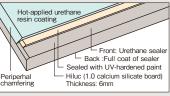
#### ◆Stendo#300

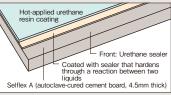
These decorative cement boards are suitable for areas in which strength is required and water is used.

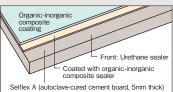
#### Stendo#1000

These high-quality decorative cement boards are ideal for situations in which the hardness of the coated surface is a priority.









- \*\*AII colored Stendo#500T/S/MR products are manufactured to order.
  \*\*Stendo#500: Color 1A (Snow White) is not available.
- %Stendo#300 : Color 15B (Shell Pink) is also available.
- \*Information about colors for Stendo#1000 can be found on Page 41.
- \*In addition to standard colors and colors available on order, products can also be made in custom colors. Please contact us for detailed information.
- \*\*Please note that actual colors may differ from those shown here because of the limitations of the printing process.

#### Main Uses

Item	General interior finishing	Clean rooms	Toilets	Washrooms	Public facilities
#400	0		0	0	0
#500	0	0	0	0	0
#500T		Static prevention	0	0	0
#500S		Resistant to germicidal lamp rays	0	0	0
#500MR		Germ- resistant	0	0	0
#300	0		0	0	0
#1000	0	0	0	0	0

Not suitable for locations subject to high temperatures and humidity, such as bathrooms.

#### 0.8 Decorative Calcium Silicate Boards

#### Stendo#400 (Noncombustible) NM-3073





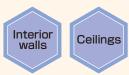
#### A lightweight, standard decorative board with excellent dimensional stability

These lightweight noncombustible decorative boards consist of calcium silicate boards coated with urethane resin. For ease of installation on-site, they can be processed in the same way as wood. The base board (Hiluc) is highly resistant to impact and provides excellent dimensional stability, making these products ideal for a wide range of interior finishing uses. The stable composition of Stendo#400 products ensures that they will continue to provide excellent performance for many years. These decorative boards offer excellent cost-performance.

#### **Standard Specifications**

Base board used	Hiluc (0.8 calcium silicate board)
Thickness mm	6
Width × Length mm	910×1820 (910× 910) 910×2420 (910×2730) (1000×2000)
Weight kg/m <sup>2</sup>	5.6
Remarks	Decorative side chamfered on all four edges, treated with surface sealer on the reverse side.

\*Dimensions shown in ( ) are manufactured to order. Please inquire.



#### **Features**

- Interior decorative panels coated with urethane resin
- Lightweight standard products made with base boards that are highly resistant to impacts and bending
- Excellent dimensional stability, extremely low levels of shrinkage and deterioration
- Not classed as formaldehyde emitting materials, warning labels not required

#### Uses

- ◆General interior finishing in commercial buildings, factories, warehouses, etc.
- Interior walls and ceilings in station buildings, public facilities, etc.
- A wide range of general interior finishing uses



the SIAA brand mark is borne on products evaluated according to ISO 22196 and they are under quality control and information disclosure by the guidelines of the Society of International sustaining growth for Antimicrobial Articles.

JP0122128A0002T

[Target product] Stendo#400

#### 1.0 Decorative Calcium Silicate Boards

#### Stendo#500/T/S/MR (Noncombustible) NM-3455 (#500/T NM-3456 (#500S)

NM-3455(#500/T/MR)



#### **Excellent surface performance in** indoor areas where hygiene is a priority

The enhanced surface performance characteristics of these sophisticated noncombustible decorative boards makes them ideal for interior finishing in spaces where cleanliness is essential, such as clean rooms. They consist of calcium silicate boards coated with a UV-hardened sealer and finished with coatings designed for various purposes. Basic features include superior smoothness, resistance to chemicals and ease of decontamination. The range also includes antistatic types and MRSA germicidal types, as well as products designed to withstand germicidal lamp rays.

#### Standard Specifications

Base board used	d	Hiluc M (1.0 calcium silicate board)
Thickness	mm	6
Width × Length	mm	910×1820 (910× 910) 910×2420 (910×2730) (1000×2000)
Weight	kg/m²	6.9
Remarks		Decorative side chamfered on all four edges, treated with surface sealer on the reverse side.

\*Dimensions shown in ( ) are manufactured to order. Please inquire.



#### **Features**

- Interior decorative boards with superior surface smoothness
- Resistant to chemicals, designed to prevent deterioration resulting from washing or adhesion
- ■Resistant to dirt adhesion, extremely easy to clean
- Excellent resistance to water—ideal for spaces in which water is used
- Not classed as formaldehyde emitting materials, warning labels not required

Stendo#500	Standard type
Stendo#500/T	Antistatic type (resistant to dust adhesion)
Stendo#500/S	Resistant to discoloration under germicidal lamp rays
Stendo#500/MR	Designed to prevent MRSA (methicillin-resistant staphylococcus aureus) infections in hospitals

#### Uses

- Interior finishing in clean rooms and medical institutions
- Interior walls and ceilings, etc., in general buildings, kitchens and sanitary facilities

#### **Decorative Autoclave-Cured Cement Boards**

#### Stendo#300 (Noncombustible) NM-2923



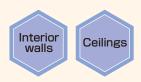
#### Dependable products for interior spaces requiring superior strength and water resistance

These products consist of autoclave-cured cement boards finished with a hot-applied urethane resin coating. The smooth surface and rich colors help to create interior spaces that combine comfort with a sense of cleanliness. The base board (Selflex A) provides excellent strength, dimensional stability and water resistance.

#### **Standard Specifications**

Base board us	ed	Selflex A	(autoclave ceme	ent board)
Thickness	mm	4	5	(6)
Width × Lengt	h mm	910×1820 (910× 910) (910×2420)		
Weight	kg/m²	7.5	9.4	11.2

\*Please inquire about dimensions shown in ( ).



#### **Features**

- Noncombustible interior finishing decorative boards with excellent surface smoothness
- Superior impact resistance compared with other decorative panels
- •Ideal for areas in which water is used, excellent water resistance thanks to characteristics of base board
- Sophisticated urethane-based decorative surface—highly resistant to soiling and chemicals
- Contains no formaldehyde—can be used with confidence as a product not covered by VOC regulations

#### Uses

- ◆Interior finishing in commercial buildings, factories, warehouses, etc.
- ◆Interior walls and ceilings in station buildings, public facilities, etc.
- ◆Suitable for a wide range of uses in kitchens and sanitary facilities, etc.

#### Inorganic Autoclave-Cured Decorative Cement Boards

#### Stendo#1000 (Noncombustible) NM-3347



#### Create superb spaces with these soft-toned, rigid decorative boards

These high-quality ceramic-type noncombustible decorative boards consist of autoclave-cured boards with a baked-on inorganic coating. Their soothing matt colors and high-quality finish make these the ideal decorative boards for interior finishing in buildings where design quality and functionality are essential.

#### Uses

- ◆Interior finishing and exterior soffits in transportation facilities
- Interior finishing in clean halls, operating theaters, toilets and other areas in hospitals
- Clean room interiors in laboratories. precision manufacturing facilities, chemical and food plants
- Toilet interiors and booths in commercial buildings and schools,

#### **Standard Specifications**

Base board used	Selflex A (autoclave cement board)
Thickness mm	5
Width × Length mm	910×1820 (910× 910) 910×2420 (910×2730) (1210×2420)
Weight kg/m <sup>2</sup>	8.6

\*Dimensions shown in ( ) are manufactured to order. Please inquire.



#### Standard colors









#### **Cera-Art Series**

#### Refined decorative finishes and textures to suit a variety of designs

#### Overview

#### **◆**Cera-Art Ecoshiny S

Ornamental decorative calcium silicate boards

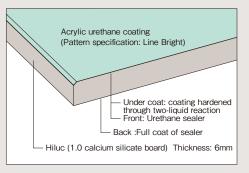
Mirror type with UV hardened clear finish Resistant to soiling, easy to clean

## UV-hardened clear finish Back: Full coat of sealer Hiluc (1.0 calcium silicate board) Thickness: 6mm

#### **◆Cera-Art Bright**

Artistic finishes for the individualists Formaldehyde-free—not subject to VOC regulations

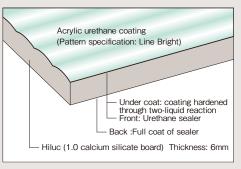
Dependable surface hardness to resist scratching



#### ◆Cera-Art Linebright

Artistic finishes for the individualists Formaldehyde-free—not subject to VOC regulations

Dependable surface hardness to resist scratching



#### ■Main uses

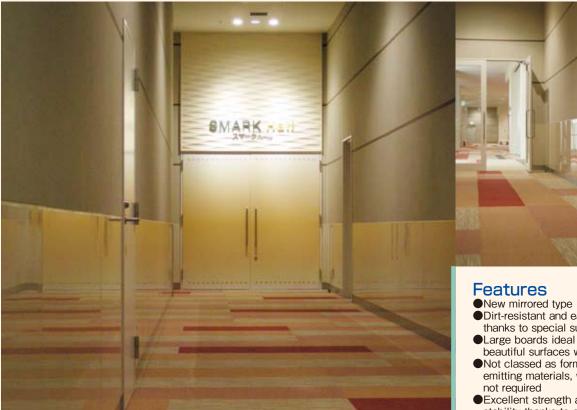
Item	General interior finishing	Kitchens	Toilets
Cera-Art Ecoshiny S	0	0	0
Cera-Art Bright	0		0
Cera-Art Linebright	0		0

 $<sup>\</sup>ensuremath{\mbox{\%}}$  Not suitable for locations subject to high temperatures and humidity, such as bathrooms.

#### Ornamental Decorative Calcium Silicate Boards (Mirrored Type)

#### Cera-Art Ecoshiny S

(Noncombustible) NM-3430



#### Design variations for enhanced wall finishes

Passageway in front of Smark Hall, (Isesaki City, Gunma Prefecture)

Special finishing processes have been used to create products that turn flat surfaces into highly original design statements while also resisting dirt to provide a maintenance-free environment.

These brightly mirrored products are ideal for a variety of spaces.

- Dirt-resistant and easy to clean, thanks to special surface finish
- Large boards ideal for creating wide, beautiful surfaces with minimal joins
- Not classed as formaldehyde emitting materials, warning labels
- Excellent strength and dimensional stability thanks to characteristics of calcium silicate base product
- Easy to process with standard tools. Suitable for quick installation using double-sided adhesive tape and elastic adhesive

- ◆Shops, showrooms, commercial facilities, facilities for the aged, hospitals, etc.
- ◆General interior finishing in kitchens, wash rooms, entrance halls, utility areas, etc.

#### **Standard Specifications**

Base board used		Hiluc M (1.0 calcium silicate board)
Decoration method		Clear finish using special UV-hardened resin coating (mirrored type)
Thickness	mm	6
Width × Length	mm	910×1820 910×2420
Weight kg	/m²	6.9



#### Standard Patterns









Pearl Peach Light

Pearl Blue Light

Pearl Orange Light

Pearl Silver Light

Patterns Available on Order











\*Please note that actual colors may differ from those shown here because of the limitations of the printing process.

#### **Ornamental Decorative Calcium Silicate Boards**

#### Cera-Art Bright (Noncombustible) NM-3348



#### **Sophisticated Blending of Design Originality and Functionality**

These interior boards have decorative surfaces coated with acrylic-urethane resin for stylishly refined finishes that combine strength with gentleness.

- Easy to process using standard tools, such as cutters and files
- More resistant to water than gypsum board—suitable for areas in which water is used
- Not classed as formaldehyde emitting materials, warning labels not required

#### Uses

- Excellent reputation as material for use in commercial and transportation facilities, such as shops, showrooms and concourses
- ◆Interior finishing in wash rooms, entrance halls, utility areas, etc.

#### **Standard Specifications**

Base board used	Hiluc M(1.0calcium silicate board)		
Decoration method	Acrylic urethane resin coating		
Thickness mm	6		
Width × Length mm	910×1820、910×2420		
Weight kg/m <sup>2</sup>	6.9		

#### Standard Colors/Patterns

Cera-Art Bright

\*Please note that actual colors may differ from those shown here because of the limitations of the printing process.



#### Ornamental Decorative Calcium Silicate Boards with Embossed Stripes

#### Cera-Art Linebright (Noncombustible) NM-3348



#### These uniquely impressive products bring an enhanced ambience of quality to any space

The line pattern on the surface creates a unique impression of softness and quality.

This product is ideal for a wide range of original design concepts, including traditional Japanese and modern themes.

#### **Features**

- Noncombustible decorative boards with a line pattern on the surface
- resistant to detergents
- Tough, dependable surface—less prone to scratching than gypsum board
- Easy to process using standard tools, such as cutters and files
- More resistant to water than gypsum board—suitable for areas in which water is used
- Not classed as formaldehyde emitting materials, warning labels not required

#### Uses

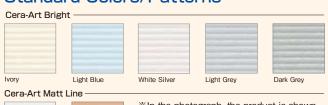
- ◆Interior finishing in wash rooms, entrance halls, utility areas, etc.
- Excellent reputation as material for use in commercial and transportation facilities, such as shops, showrooms and concourses

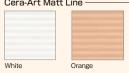
#### **Standard Specifications**

Base board used	Hiluc M(1.0calcium silicate board)		
Decoration method	Acrylic urethane resin coating		
Thickness mm	6		
Width × Length mm	910×1820、910×2420		
Weight kg/m <sup>2</sup>	6.9		



#### Standard Colors/Patterns





- ※In the photograph, the product is shown with the long side upright.
- %Please note that actual colors may differ from those shown here because of the limitations of the printing process.

#### **Surface Performance of Decorative Boards**

#### Stendo Series

#### Performance of decorative surfaces

Test Item	#400	#500	#500T	#500S	#500MR	#300	#1000	Test Method
Coating adhesion	16/16	16/16	16/16	16/16	16/16	16/16	16/16	Sellotape removal
Surface hardness	2H	2H	3H	3H	3H	3H	5H	Pencil hardness
Soiling resistance	No discoloration	No discoloration	No discoloration	No discoloration	No discoloration	No discoloration	No discoloration	Red crayon wiped off after 24 hours
Electrostatic properties (surface resistance)	_	9.1×10 <sup>15</sup> Ω	1.6×10 <sup>6</sup> Ω	_	_	_	_	JIS K 6911
Germicidal lamp rays (gloss maintenance ratio)	_	28%	_	87%	_	_	_	Exposure to 20x germicidal lamp at 15cm for 1,500 hours

#### **Chemical Resistance**

Chemical	Concentration	#400	#500	#500T	#500S	#500MR	#300	#1000
Hydrochloric acid	5%	0	0	0	0	0	0	0
Nitric acid	5%	0	0	0	0	0	0	0
Acetic acid	5%	0	0	0	0	0	0	0
Caustic soda	5%	0	0	0	0	0	0	0
Methyl ethyl ketone	Undiluted	0	0	0	0	0	0	0
Toluene	Undiluted	0	0	0	0	0	0	0
Butyl acetate	Undiluted	0	0	0	0	0	0	0
White kerosene	-	0	0	0	0	0	0	0
Sodium hypochlorite (antiformin)	Undiluted	0	0	0	0	0	0	0
Benzalkonium chloride (Osvan)	0.2%	0	0	0	0	0	0	0
Official phenol	5%	0	0	0	0	0	0	0
Chlorhexidine (Hibiden)	0.02%	0	0	0	0	0	0	0
Ethyl alcohol	Undiluted	0	0	0	0	0	0	0

Substances were spot dripped, left for 24 hours, and cleaned off with a neutral detergent, and the effects were observed.

Contamination Resistance

Substances were spot dripped, left for 24 hours, and cleaned off with a neutral detergent, and the effects were observed.

Standard levels / ©: No soiling O: Slight soiling

Contaminant	#400	#500	#500T	#500S	#500MR	#300	#1000
Vegetable oil (tempura oil)	0	0	0	0	0	0	0
Soy sauce	0	0	0	0	0	0	0
Worcester sauce	0	0	0	0	0	0	0
Coffee	0	0	0	0	0	0	0
Tea	0	0	0	0	0	0	0
Salt water	0	0	0	0	0	0	0
Nicotine resin	0	0	0	0	0	0	0
Crayon	0	0	0	0	0	0	0
Shoe polish	0	0	0	0	0	0	0
Pencil	0	0	0	0	0	0	0
Ink	0	0	0	0	0	0	0
Magic marker ink	0	0	0	0	0	0	0

Substances were spot dripped, left for 24 hours, and cleaned off with a neutral detergent, and the effects were observed. Standard levels/©:No marking O:Slight marking

#### Cera-Art Series

#### **Coating Performance**

	Test Item	Test Method	Ecoshiny S	Bright	
	Coat adhesion	Sellotape removal	16/16	16/16	
Surface hardness		Pencil hardness	2H	3H	
	Water resistance	Immersion for 7 days at room temperature	No abnormality	No abnormality  Compliant	
	Wear resistance	JIS A 5423	Compliant		
	Contamination resistance	Red crayon for 24 hours	No marking	No marking	
	Vegetable oil		0	0	
	Soy sauce	Substances were spot dripped, left for 24 hours,	0	0	
Ease	Nicotine resin	and cleaned off with	0	0	
of de	Oil wax	a neutral detergent, and the	0	0	
Ease of decontami-nation	Magic marker ink	effects were observed.	0	0	
ami-n	Ink	■Standard levels	0	0	
ation	vinegar	© : No soiling	0	0	
	Magiclean	○ : Slight soiling	0	0	
	Sunpole		0	0	
	Hydrochloric acid (5%)		0	0	
	Nitric acid (5%)	Substances were spot	0	0	
	Acetic acid (5%)	dripped, left for 24 hours,	0	0	
esist	Caustic soda (5%)	and cleaned off with a neutral detergent, and the	0	0	
ance	Methyl ethyl ketone	effects were observed.	0	0	
Resistance to chemicals	Ethyl alcohol		0	0	
emica	Cockroach S	■Standard levels	0	0	
SIE	Paibenika	◎ : No marking	0	0	
	Kabi Killer	○ : Slight marking	0	0	
	Sodium carbonate (1%)		0	0	
	Heat resistance	3 hours at 140°C	⊿E≦3.0	⊿E≦3.0	
	Light resistance	JIS K 5600(100 hrs under carbon arc)	⊿E≦3.0	⊿E≦3.0	

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#### •Important Information about the Contents of this Catalog

- \*Numerical data included in this catalog are averages and are not intended to represent guarantees.
- \*Mass figures are based on standard weights and may vary within the range of board thickness tolerances, moisture content and other factors.
- \*Color samples may differ from the colors of actual products because of the limitations in the printing process.



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