

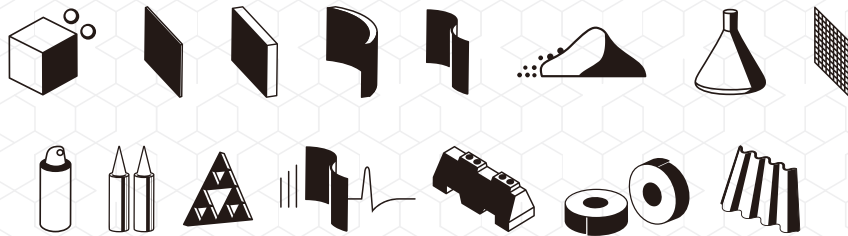
High Performance Plastics Company



Building & Infrastructure Materials Catalog



Materials for Buildings and Infrastructure



SEKISUI CHEMICAL CO., LTD.

High Performance Plastics Company
Building & Infrastructure Materials Business Strategy Office

A new frontier,
a new lifestyle.

Sekisui Chemical Group will continue to develop the frontiers of “Creation of housing / Social infrastructure” and “Chemical solutions”, utilizing its prominent technology and quality, thereby contributing to the enhancement of the lives of people around the world and the global environment.

Company Name: Sekisui Chemical Co., Ltd.

Established: March 03, 1947

Capital: 100,002 million yen

President &
Representative
Director: Teiji Koge

Employees: 26,080(as of March 2018)

Net Sales: 1,107,429 million yen(as of March 2018)

Operating Income: 99,231 million yen(as of March 2018)

Ordinary Income: 93,929 million yen(as of March 2018)

Net Income for the Period: 63,459 million yen(as of March 2018)

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2-4-4 Nishi Temma, Kita-ku, Osaka 530-8565
Japan

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2-3-17 Toranomom, Minato-ku, Tokyo
105-8450 Japan

Tel:+81-3-5521-0521



High Performance Plastics Company

Housing Company

Urban Infrastructure and Environmental Products Company

Sekisui Chemical Group consists of three in-house companies (three business entities) and the corporate department, a business unit with its head-office functions, each of which operates various businesses.

High Performance Plastics

Developing and providing high performance materials to take your products even further.



Housing

Our business is based on the principle of providing environmentally friendly housing to offer safe and comfortable living for at least 60 years.



Urban Infrastructure and Environmental Products

Contributing to the development of safe and convenient infrastructure and water environments.





High Performance Plastics Company

The High Performance Plastics Company utilizes its unique fine particle, adhesion and precise synthesis technologies to develop and provide high-performance and intermediate materials for a wide variety of fields such as electronics, automobiles and transportation, buildings and infrastructures, life sciences and industry.



- Europe**
- ① SEKISUI CHEMICAL GmbH
 - ② SEKISUI ALVEO AG
 - ③ SEKISUI ALVEO B.V.
 - ④ SEKISUI ALVEO LTD.
 - ⑤ SEKISUI ALVEO S.r.L.
 - ⑥ SEKISUI ALVEO GmbH
 - ⑦ SEKISUI ALVEO BS GmbH
 - ⑧ SEKISUI-ALVEO S.A.
 - ⑨ SEKISUI ALVEO (BENELUX) B.V.
 - ⑩ SEKISUI ALVEO (GB) LTD.
 - ⑪ SEKISUI S-LEC B.V.
 - ⑫ SEKISUI SPECIALTY CHEMICALS EUROPE S.L.
 - ⑬ SEKISUI DIAGNOSTICS (UK) LIMITED
 - ⑭ SEKISUI DIAGNOSTICS GmbH

• Buildings and Infrastructures

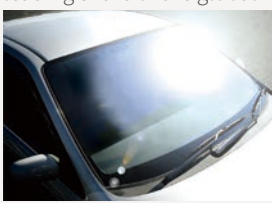
We supply materials for the construction and infrastructure sectors, including resin materials for heat-resistant pipes and fire protection materials.



- Specialty Chemicals Division (chlorinated polyvinyl chloride resin, etc)
- Fire Protection Materials Division
- Functional Tape Division (building materials)
- Interlayer Film Division (building materials)
- Foam Division (building materials)
- Sekisui Fuller Co., Ltd. (building materials)
- Sekisui Techno Molding Co., Ltd. (water storage tank)
- Sekisui Nano Coat Technology Co., Ltd. (building materials)

• Automobiles and Transportation

We supply foaming materials and molded resin products used for interior and exterior automotive components, with a particular focus on interlayer films for automotive laminated glass in which we have the leading share of the global market.



- Interlayer Film Division (vehicle materials)
- Foam Division (vehicle materials)
- Sekisui Techno Molding Co., Ltd. (vehicle materials)
- Functional Tape Division (vehicle materials)
- Specialty Chemicals Division (vehicle materials)
- Sekisui Polymatech Co., Ltd. (vehicle materials)

Global Expansion of Sekisui Chemical High Performance Plastics Company

In order to promote optimum and efficient use of raw materials and energy, and production in areas where demand is high, Sekisui has established production and sales bases not only in Japan but also all over the world to provide a range of products and services to meet customer requirements. We aim to further accelerate global expansion by adapting the business model of the Sekisui Chemical Group to suit local communities.

Asia/Oceania

- 15 SEKISUI(HONG KONG)LTD.
- 16 SEKISUI(SHANGHAI)INTERNATIONAL TRADING CO.,LTD.
- 17 SEKISUI HIGH PERFORMANCE PACKAGING(LANGFANG)CO.,LTD.
- 18 SEKISUI S-LEC(SUZHOU)CO.,LTD.
- 19 SEKISUI MEDICAL TECHNOLOGY(CHINA)LTD.
- 20 SEKISUI MEDICAL TECHNOLOGY(SUZHOU)LTD.
- 21 SEKISUI POLYMATECH(SHANGHAI)CO.,LTD.
- 22 SEKISUI YOUNGBO HPP(WUXI)CO.,LTD.
- 23 THAI SEKISUI FOAM CO.,LTD.
- 24 SEKISUI S-LEC (THAILAND) CO.,LTD.
- 25 SEKISUI CHEMICAL(THAILAND) CO.,LTD.
- 26 SEKISUI SPECIALTY CHEMICALS (THAILAND) CO.,LTD.
- 27 S AND L SPECIALTY POLYMERS CO.,LTD.
- 28 SEKISUI CHEMICAL SINGAPORE PTE,LTD.
- 29 SEKISUI SINGAPORE PTE,LTD.
- 30 PT.SEKISUI INDONESIA
- 31 PT. ADYAWINSA SEKISUI TECHNO MOLDING
- 32 SEKISUI KOREA CO.,LTD.
- 33 YOUNGBO CHEMICAL CO.,LTD.
- 34 SEKISUI CHEMICAL(TAIWAN) CO.,LTD.
- 35 SEKISUI PILON PTY.LTD.
- 36 SEKISUI CHEMICAL INDIA PRIVATE LTD.
- 37 SEKISUI DLJM MOLDING PRIVATE LTD.
- 38 SEKISUI POLYMATECH TRADING (THAILAND)CO.,LTD.
- 39 PT.SEKISUI POLYMATECH TRADING INDONESIA

North America

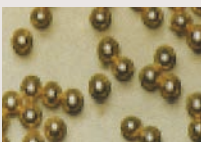
- 40 SEKISUI VOLTEK, LLC.
- 41 SEKISUI PRODUCTS, LLC.
- 42 SEKISUI S-LEC AMERICA, LLC.
- 43 SEKISUI XENOTECH, LLC.
- 44 SEKISUI SPECIALTY CHEMICALS AMERICA, LLC.
- 45 SEKISUI DIAGNOSTICS, LLC.
- 46 SEKISUI DIAGNOSTICS P.E.I. INC.
- 47 SEKISUI POLYMATECH AMERICA CO.,LTD.

Central and South America

- 48 SEKISUI S-LEC MEXICO S.A. de C.V.
- 49 SEKISUI ALVEO REPRESENTATIVE LTD.A.
- 50 SEKISUI SPECIALTY CHEMICALS MEXICO,S.DER.L.DE C.V.

• Electronics

We supply advanced materials that include products such as conductive fine particles which we have the leading share of the global market, photosensitive materials and semiconductor materials.



- Sekisui Chemical Co., Ltd.
- Device Materials Division
- Sekisui Nano Coat Technology Co., Ltd. (electronic materials)
- Specialty Chemicals Division (electronic materials)
- Foam Division (electronic materials)
- LJ Business Promotion Department
- Sekisui Polymatech Co., Ltd. (electronic materials)

• Life Sciences

We supply medical products such as reagents and analyzers and adhesives used in sanitary goods.



- Sekisui Medical Co., Ltd.
- Sekisui Fuller Co., Ltd. (sanitary materials)

• Industry

We supply functional materials created from cutting-edge technologies, such as adhesives, packaging tapes, and plastic containers that are used in daily life and throughout society.

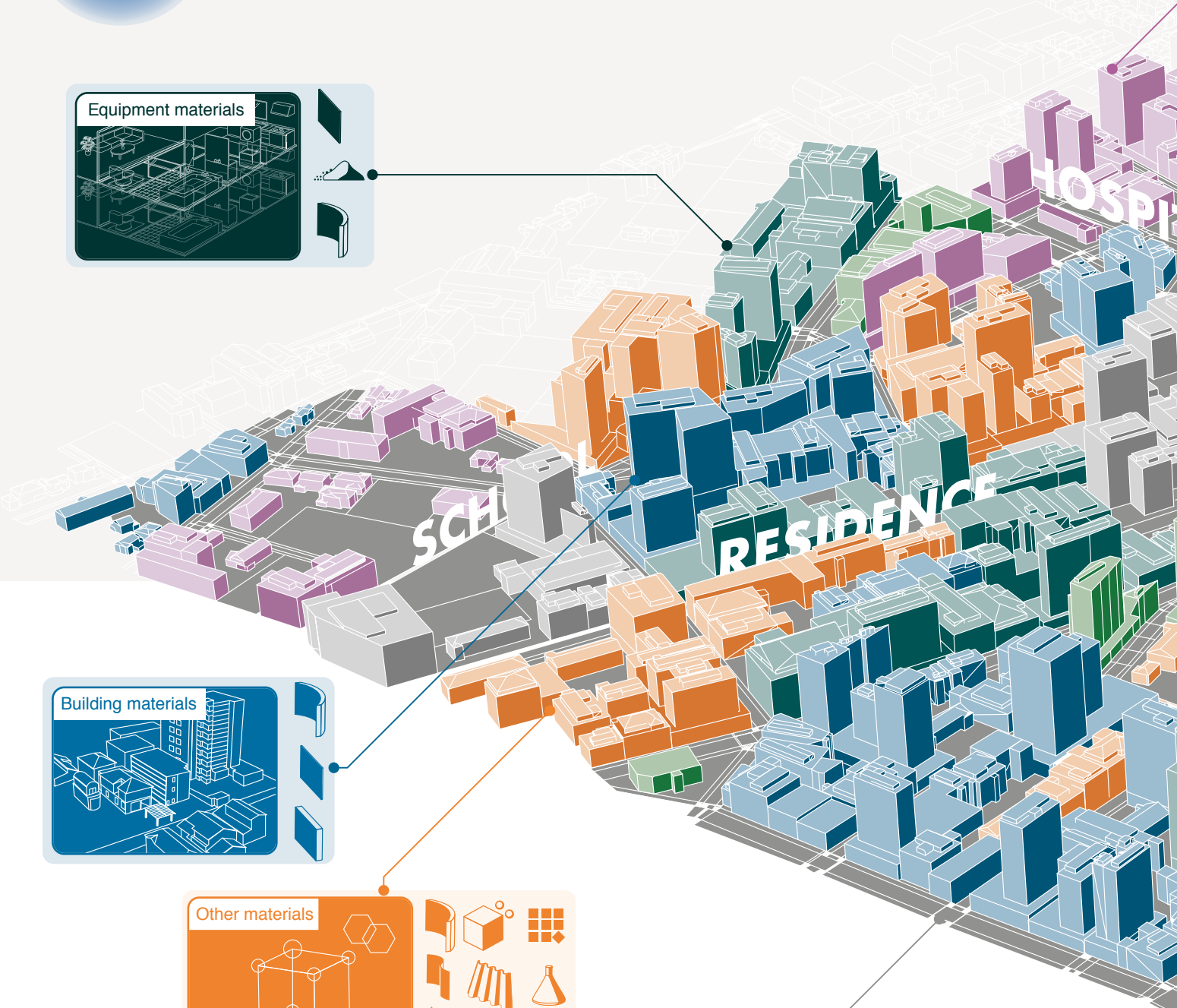


- Functional Tape Division (packing)
- Sekisui Fuller Co., Ltd. (hot-melt, etc.)
- Sekisui Techno Molding Co., Ltd. (container)
- Specialty Chemicals Division (industry materials)



High Performance Plastics for Buildings & Infrastructure

Our products are widely used in the housing, building, and infrastructure fields.



Equipment materials

Building materials

Other materials

Infrastructure materials

Adhesive / Tape

Materials for health care products



◆ Equipment materials

Fire-resistant thermal expansion material	Fi-Block® (for fire stopping system)	P.7
Chlorinated polyvinyl chloride resin	CPVC Resin & Compound	P.9
Foamed polyolefin insulation	THERMOBREAK®	P.11
Non-combustible damping sheet	CALMMOON Sheet	P.13

◆ Building materials

Damping sheet for metal roof	Bivres Roof Sheet	P.15
Sound-insulating sheet	Bivres Floor Sheet	P.16
Polypropylene foam board	Zetlon®	P.17

◆ Infrastructure materials

Underground rainwater management solution	Cross-Wave	P.19
Fast, temporary access road construction	Plastic Road	P.21
New concept sun shade	Airshade	P.23
Adhesive joint filter	S-Dine® Joiner-W	P.25
Highly resistant and super durable grounding resistance reducing agent	DOUDEN CRETE	P.26

◆ Adhesive / Tape

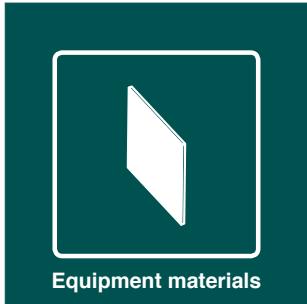
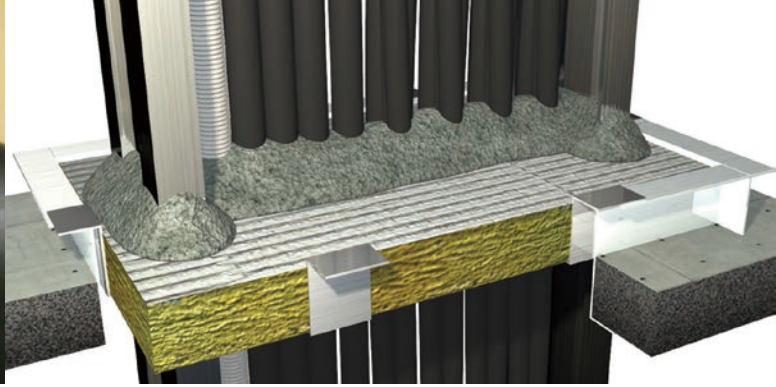
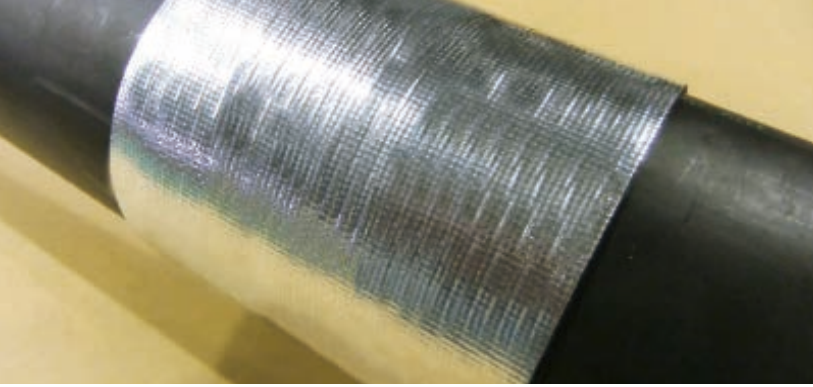
Modified silicone	Adhesive	P.27
Modified silicone	Sealant	P.29
Strong bonding tape	SEKISUI SJ	P.31
Adjustable	Double-faced Tape 530	P.33
Plasticizer-resistant	Double-faced Tape 577SA-L	P.34
Air-tight waterproof tape	747WT (double-faced tape) 740 (single-faced tape)	P.35
Masking tape	Masking tape	P.37

◆ Other materials

Fire-resistant thermal expansion material	Fi-Block® (for door , window)	P.39
Cross-linked polyolefin foam	Softlon® S	P.41
Insulation material for corrugated metal roofs	Softlon® SK	P.43
Open cell physically crosslinked polyolefin foam	Softlon® OPC	P.43
Thin cross-linked polyolefin foam	Volara	P.44
Cross-linked polyolefin foam	Fabricated Softlon®	P.44
Architectural interlayer film	S-LEC™ Film	P.45
Heat-shielding net	Multi-functional heat-shielding net series	P.49
A heat shielding curtain	TESORO	P.51
Highly functional tatami	MIGUSA	P.53
Thermo-expandable microspheres	ADVANCELL® EM	P.55
Water-soluble film	ADVASOL	P.56
Cushioning / Damping materials	Rubber / GEL / Damper	P.57
Heat resistance and electrical insulation	Silicone Thermal Conductive Sheet	P.58

◆ Materials for health care products

Anti-allergen agent	Allerbuster™	P.59
Antivirus processing agent	Viru-taker	P.61
Virus removing and disinfectant spray	NOWCARE	P.63
Natural mineral mist	NANOTOTALE™	P.64



A new type of a fire-resistant material which expands and forms a thermal insulating layer when a fire breaks out.

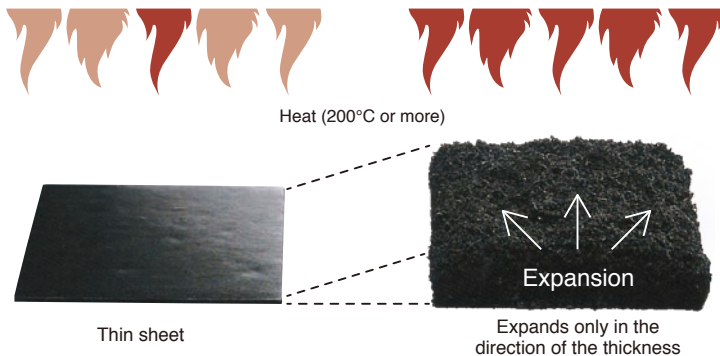
Fire-resistant thermal expansion material

Fi-Block® (for fire stopping system)

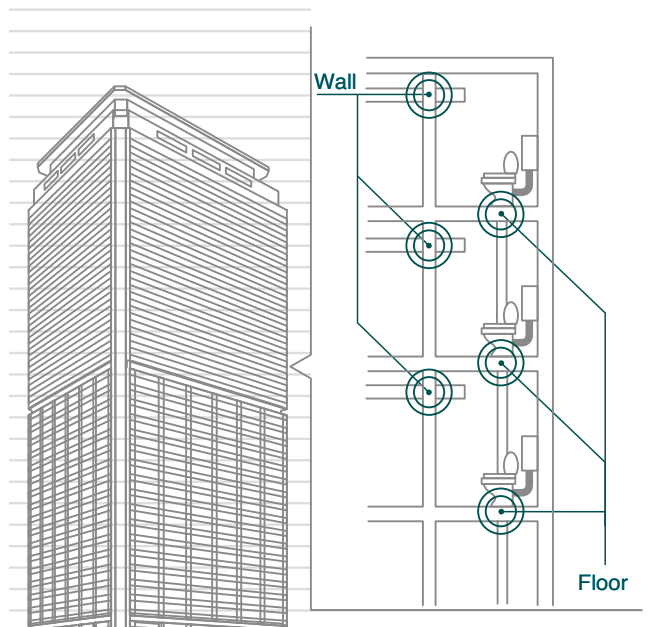
Just by winding this organic fire-resistant material around a pipe, the pipe changes into a fire-protection one. Unlike conventional inorganic fire-resistant materials, this product expands to demonstrate fire-resistance and fire protecting performances only when it is exposed to heat from fires.

Features >>>

Fi-Block has a thin sheet and a tape which makes it easy to bend and cut it. It is also an optimum material for small and narrow spaces, which increases fire-resistant design flexibility. Sekisui Chemical offers a variety of Fi-Block products in butyl, epoxy and PVC to suit various applications.



Forms a thermal insulating layer when heated or when a fire breaks out



For cables >>>

● Certified by the Ministry of Land, infrastructure, transport and tourism (Certification related to the Building Standards Law)
PS060WL-0514/PS060WL-0530/PS060FL-0808/PS060WL-0789/PS060WL-0788/PS060FL-0667

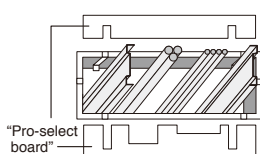
Advantages

- Unnecessary "electric tools".
- Available for both wall and floor.
- Easy installation for additional cables.

Installation

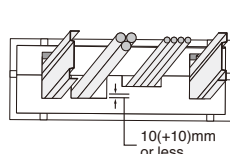
■ Floor

1



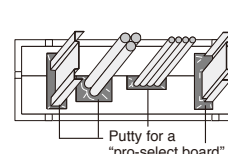
Cut two pro-select boards to make an opening to fit the size and shape of a cable or a conduit pipe. Please note that the permitted gap between the cable/ the conduit pipe and the edge of the board is less than 10mm.

2



Put together the boards to create an opening by pressing them until the fastening hardware is fit perfectly.

3



Fill the gap between the cable and the board with putty until the puttied part reaches a height of 30mm or more from the place which is level with the surface of the board and a thickness of 20mm or more. (However, a thickness of the part puttied to the board should be 10mm or more.)

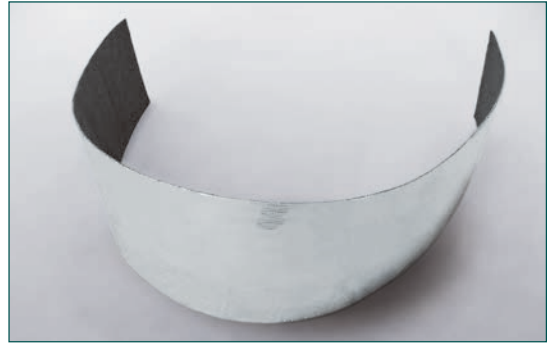


For plastic pipe >>>

● Test Certificate/Approval BS476 Part20. EN1366 Part3.

Advantages

- Providing fire rating up to 2 hours.
- Easy retrofit installation by one person.
- To be installed easily even at limited space because of its thin sheet.
- Environmentally safe - Halogen free and no fibres.



Wrap size : One size

Compatible supplemental equipment

Length	Width	Thickness	Mastic	Fire Compound	Fire Batt
1,000 mm	130 mm	2.1 mm	Fire rating:120 minutes \geq	Fire rating:120 minutes \geq	Thickness:50 mm \leq

Applications : One size fits all & versatile

Performance matrix

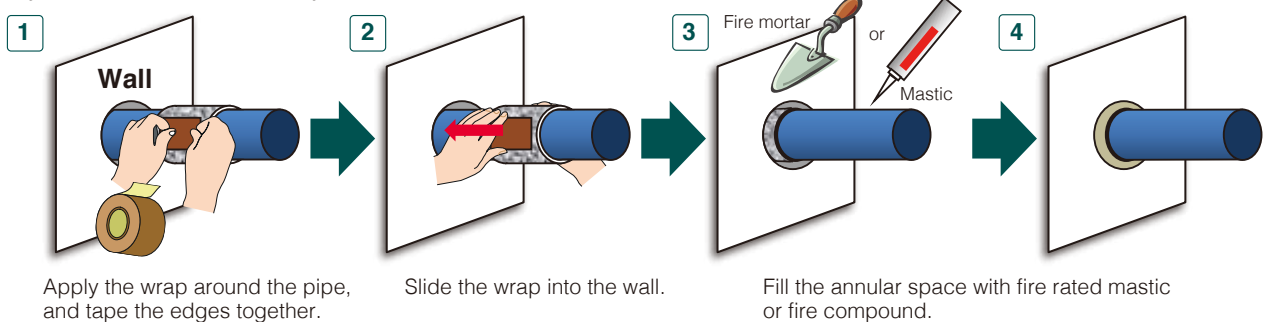
			Diameter												
			PVC				PE			ABS			PP		
Integrity	60Min.	Wall	50	75	100	150	50	75	100	50	75	100	50	75	100
				Floor	1Lap				2Lap		1Lap				
	120Min.	Wall	1Lap				2Lap		1Lap						
		Floor	1Lap				2Lap		1Lap						

Wall/floor sections

Integrity		Drywall 100-125		Concrete wall 100-125		Fire batt(single layer)		Floor 100mm \geq	
		60Min.							
120Min.		Drywall 125-130		Concrete wall 125-130		Fire batt(double layer)		Floor 150mm \geq	

Installation One size fits all & versatile

Drywall / Concrete wall / Masonry wall





Industrial plate (clear windows etc.)



Sprinkler system pipes (superior self-extinguishing properties)



Improved heat-resistant PVC resin with its excellent performance of PVC.

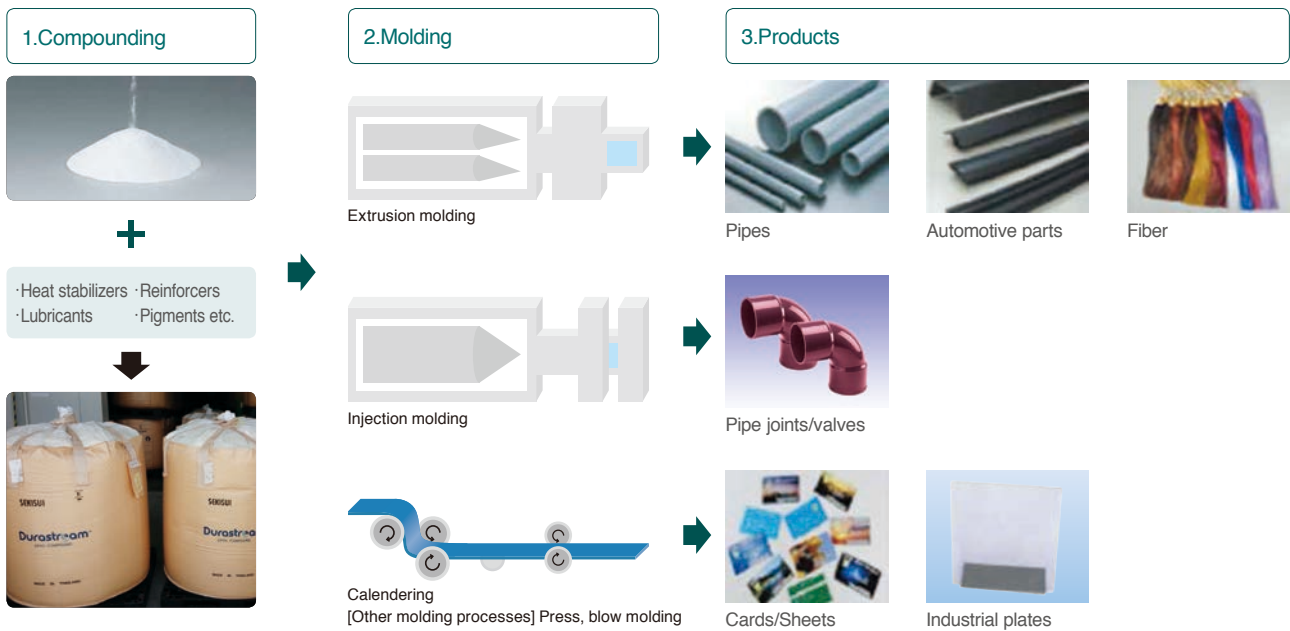
Chlorinated polyvinyl chloride resin

CPVC Resin & Compound

Sekisui CPVC is a post-chlorinated polyvinyl chloride. It offers improved heat resistance without sacrificing the excellent performance of polyvinyl chloride. The CPVC business segment at Sekisui Chemical is production and distribution of not only resin products, but also compound products that can be used directly in molding applications. Sekisui chemical can also provide technical assistance in molding applications with our own molding technologies.

CPVC molding process & applications >>>

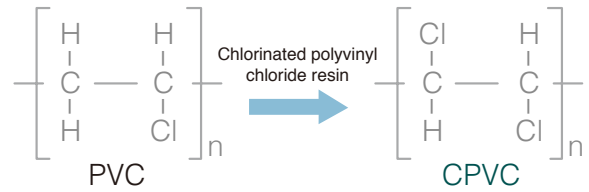
CPVC is suitable for several molding processes, including extrusion molding, injection molding and calendering.



Sekisui chemical can provide technical assistance in molding applications with our own molding technologies.

Features >>>

CPVC is obtained by adding chlorine to PVC. Sekisui's unique PVC polymerization and chlorination technology make it possible to manufacture chlorinated polyvinyl chloride of superior quality.

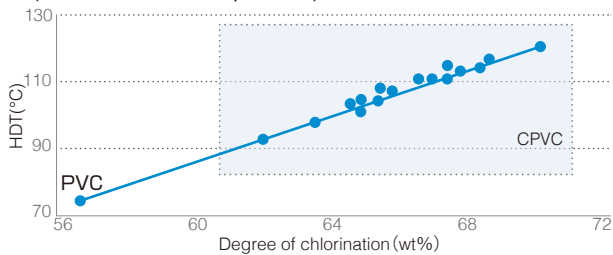


Specifications >>>

Heat resistance

The heat deflection temperature is 10°C to 40°C higher than that of normal PVC

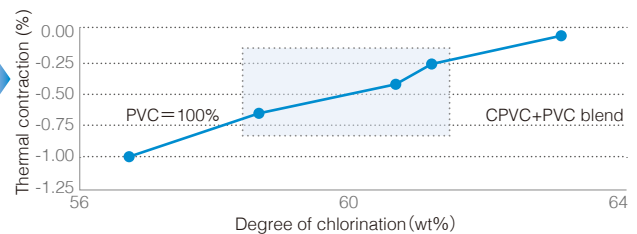
■ Correlation between degree of chlorination and HDT (Heat Deflection Temperature)



*HDT: Heat deflection temp. (load: 1.82MPa)

Superior thermal contraction properties at high temperatures due to improved heat resistance.

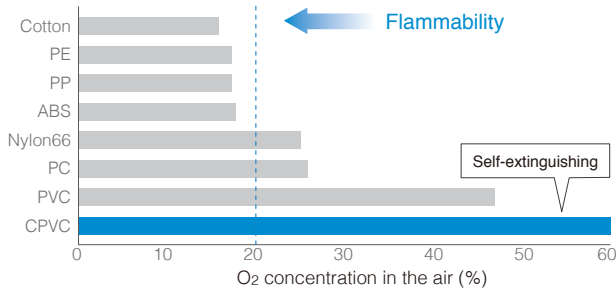
■ Correlation between degree of chlorination and thermal contraction (Reference: measured using pressed sheet)



High fire retardancy

Superior fire retardancy (Self-extinguishing resin)

■ Correlation between degree of chlorination and HDT (Heat deflection temperature)



Mechanical & thermal properties

Item	Unit	CPVC	PVC
Specific gravity	-	1.52	1.43
Impact strength (izod)	J/m	150	150
Tensile strength	MPa	53-55	50-53
Tensile modulus of elasticity	MPa	2650	2550
HDT	°C	110	75
Linear expansion coefficient	1/°C	5×10 ⁻⁵	5×10 ⁻⁵

*Properties for raw materials for general extrusion molding applications

Chemical resistance

Resistant to a large variety of acids and alkali.

Durastream™ CPVC COMPOUND

Durastream is a compound for plumbing applications, and has received certification from NSF, an international product certification institution in the United States. In addition to its physical properties, NSF also verified its safety to humans, and its credibility as a pipe material is guaranteed. (Certified to NSF 61/ NSF 14 standard)



CPVC compound for pipes



THERMOBREAK sheet



THERMOBREAK tube



Equipment materials

A globally recognized product featuring excellent insulation and workability. Easily cuttable and bendable thermal insulation material

Foamed polyolefin insulation

THERMOBREAK®

THERMOBREAK® is an thermal-insulating material made from physically (irradiation) cross-linked polyolefin form. It was developed 30 years ago in Australia and is now widely used in various applications such as air ducts and plumbing pipes as a high-performance thermal insulation.

*THERMOBREAK®, which is a low GWP(Global Warming Potential) and allergy product does not use ozone destroying agents such as chlorofluorocarbons (CFCS) and hydro chlorofluorocarbons (HCFCs), PVC and formaldehyde, and meets the Green Star, RoHS, REACH and various fire-resistant standards.

Features >>>

It is produced using the Sekisui's unique electron beam cross-linking and forming technologies, which exhibits excellent insulation properties, low water absorption and low vapour permeability. And it meets various fire-retardant and smoke protection standards set by international institutions and organizations. It does not easily get scratched because of its surface with reinforced aluminum foil film on, and provides fast and simple installation because of its adhesive side laminated with a nonwoven fabric. It can be cut with a cutter and pressed easily.

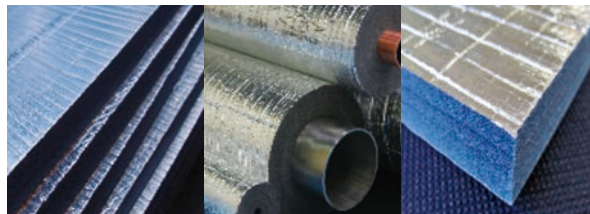


Easy to cut and highly flexible



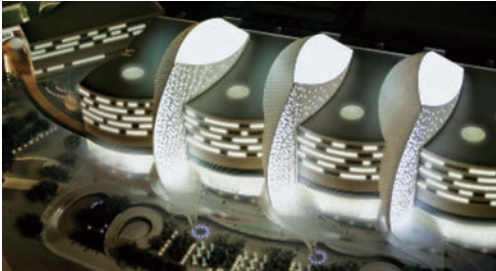
Product lineup >>>

THERMOBREAK Class 0 sheet & tube	The product that conforms to BS 476 Part6&7 Class 0
THERMOBREAK LS sheet & LS-F tube	The product that conforms to FM approved, UL 723,Euroclass B S2,d0
THERMOBREAK No clad sheet & tube	Installable to exterior materials without racking
THERMOBREAK acoustic plus	Sound-absorbing material used in air ducts



Purpose >>>

THERMOBREAK® has been used in over 600 buildings all over the world for more than 30 years. and become a commonly used building material as foamed polyolefin insulation. In addition, its quality and reliability have been proven to be so high by the fact that it demonstrate a strong resistance to various types of climate in the world. The Sekisui Chemical Group has a global technical support system , which gives technical support in many countries and regions including Asia, the Pacific Rim, India, the Middle East and North America.



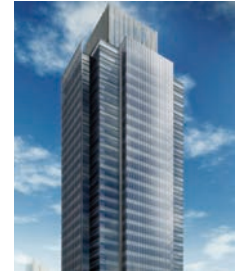
SIDRA Hospital, Doha, Qatar



Vietin Bank Centre, Hanoi-Vietnam



Westin Hotel, Jakarta



WTC 3, Jakarta

Specifications >>>

Physical properties

Material	Reinforced aluminum foil film + Electron beam crosslinked foam polyolefin foam + Acrylic adhesive	Resistance to fungi (ASTM G21)	Zero growth
Density	25 kg/m ³ (foam only)	Leachable chlorides (ASTM C871)	< 12ppm (< 0.0012% w/w)
Thermal conductivity (ASTM C518)	0.032 W/m · K(23°C) 0.036 W/m · K(36°C)	Ozone resistance	Excellent
		UV resistance	Excellent
Water vapor permeability (ASTM E96)	2.3 x 10 ⁻¹⁵ kg/Pa.s.m(0.0084 mg.m/N.h)	Green star rating	Low VOC certification
Water vapor performance	1.95 x 10 ⁻⁴ g/MN.s	Noise reduction coefficient (ISO 354)	0.20 (12mm foam thickness) 0.30 (25mm foam thickness)
Permeability resistance factor	μ > 80,000		Operating temperature range
Water absorption by volume (ASTM C1763 B, 24h)	< 0.2% v/v	REACH regulation	Compliant

Fire and smoke behaviour

Measuring methods	Description	Result	Remarks
BS 476 Part 6 & 7	Fire propagation Surface spread of flame	Class 0	
BS 6853 Annex B	Smoke toxicity	Complies (R < 1.0)	
ASTM E84 (UL 723)	Flame spread index Smoke development index	≤ 25 ≤ 50	THERMOBREAK LS ≤ 25mm Complies(NFPA 90 A&B)
ASMT C411	Hot surface performance	Complies NFPA 90 A and B	
ASTM E162	Surface flammability	Complies NFPA 130	
ASTM E662	Smoke density	Complies NFPA 130	
FM 4924	Flammability standard for pipe and duct insulation	FM approved	THERMOBREAK LS sheet only: ≤ 25mm THERMOBREAK LS-F tube only: ≤ 8" IPS (219mm) ID and ≤ Wall thickness 50mm
EN 13823	Single burning item	Euroclass B-S2, d0 rating	THERMOBREAK LS sheet only
ISO 11925 Part 2	Ignitability	Euroclass B-S2, d0 rating	THERMOBREAK LS sheet only
IMO MSC 61 (67) Part 2	Smoke toxicity	Complies	
ISO 5695 Part 2	Smoke density Smoke toxicity	Complies IMO MSC 61 (67) Part 2 Dm<200 Satisfies max allowable concentrations for the following combustion gases: CO, Hcl, HBr, HF, HCN, NOx, SO ₂	
AS 1530 Part 3	Ignitability index Spread of flame index Head evolved index Smoke development index	0 0 0 0-1	
UL 94	Horizontal burn	UL approved to HF-1	



A high-performance, non-combustible and vibration-absorbing material capable of reducing noise and vibration simply by attaching it to what you want to.

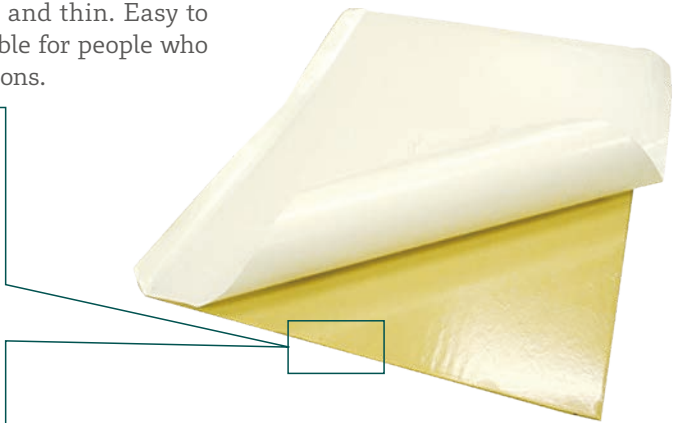
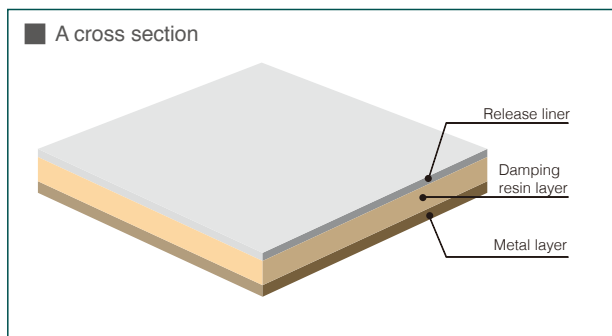
Non-combustible damping sheet

CALMMOON Sheet

"CALMMOON Sheet" suppresses far more vibration than conventional damping sheets do. It greatly absorbs vibrations of high and low frequencies.

Purpose >>>

Highly vibration-absorbing though the sheet is light and thin. Easy to install because the sheet has an adhesiveness. Suitable for people who are annoyed by discomfort and noise caused by vibrations.

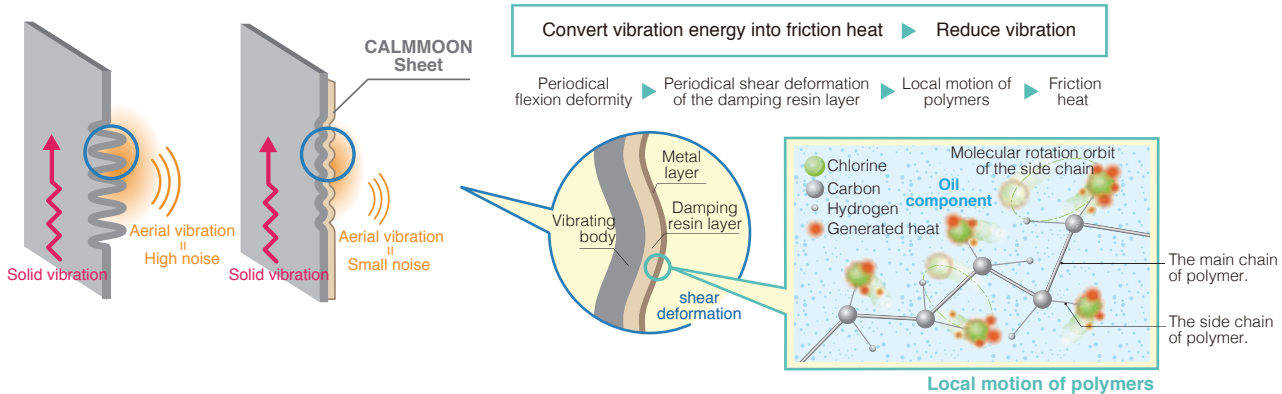
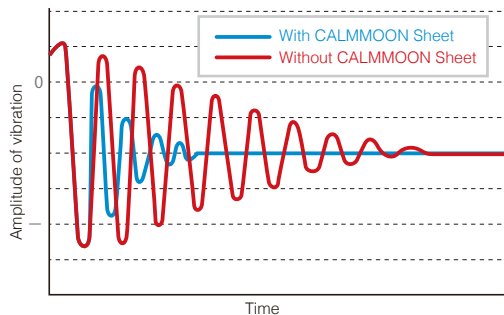


<p>Shipping/Aircraft</p>	<p>Motorcycle/Vehicle</p>	<p>Railway</p>	<p>Air-conditioning systems/ Air-conditioning duct</p>
<p>Reduces noise caused by vibration from an engine room.</p>	<p>Reduces unpleasant vibration and noise coming from a running motorcycle or car.</p>	<p>Reduces radiated sound by attaching the sheet to the web area of the iron beam.</p>	<p>Reduces vibration noise from an air-conditioning system or duct.</p>

Features >>>

Highly vibration-damping properties

- Consists of a metal layer and a damping-resin one.
- Absorbs heat energy converted from vibration energy by the damping resin layer.



Non-combustible

This sheet has been certified as a non-combustible product used for many purposes thanks to the fact that its flame-retardant resin, which meets the standard equivalent to UL94V-O, is laminated with various metals.

Construction-related certificate

Certifying organization: The Ministry of Land, Infrastructure, Transport and Tourism (NM-0767)



NM-0767

Shipping-related certificate

Certifying organization: Nippon Kaiji Kyokai (NK)(O6FPA35CV)
EC TYPE EXAMINATION (MED)
The Ministry of Land, Infrastructure, Transport and Tourism (JG)



O6FPA35CV

Certificate: Fire retardant surface materials
Primary deck coverings

Railway-related certificate

Certifying organization: Japan Railway Rolling Stock & Machinery Association, an incorporated association



Railway-related certificate

Certificate: Flammability standard for rail vehicle "Nonflammability"

Aircraft-related certificate

Test standard: CFR PART25.853(a) 【Ambt25-116】 Appendix F Part 1

Easy installation

- Easily attachable because of its adhesiveness.
- Easily cuttable on the spot.
- Light and great workability.

	General type	Shipping type	Aluminium type
Weight	3.8kg/m ²	6.9kg/m ²	3.4kg/m ²
Thickness	1.3mm	1.3mm	1.9mm

Eco-friendly

- The sheet that meets many industries' regulations of substances of concern (SOC).
CALMMOON conforms to RoHS (Restriction of the use of certain hazardous substance in electrical and electronic equipment) and ELV (End of Life Vehicles) directive regarding Cd, Pd, Hg, Cr+6, PBB, PBDE and to directive 2009/251/EC regarding DMF.
- Low VOC emissions
CALMMOON emits far less Volatile Organic Compounds (VOCs), which are considered to be one of the major causes of the sick building syndrome, than the guideline level set by the ministry of health, labour and welfare.

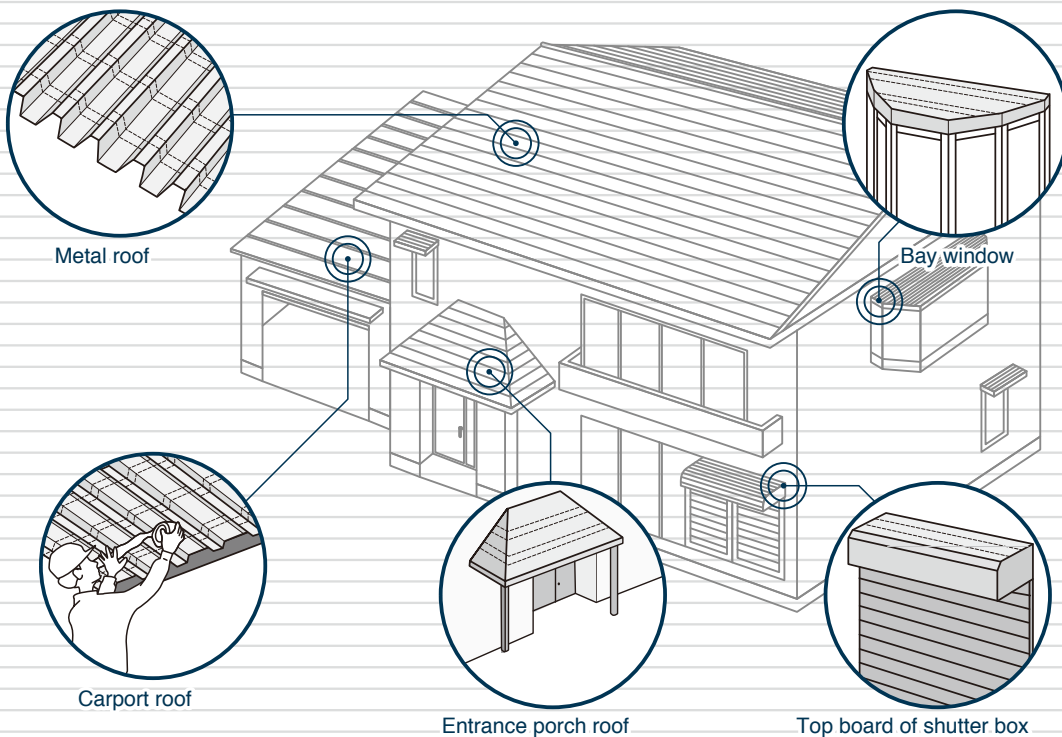


Building materials

Shuts out the unpleasant sound of rain!
 Drastically reduces the sound of rain falling on the metal roofs to provide a more comfortable living environment and lifestyle.

Damping sheet for metal roof **Bivres Roof Sheet**

This is a sheet to reduce the sound of rain by lining a metal roof with it. The mechanical energy generated by vibration is converted into the the kinetic energy generated by high molecules in the sheet, thanks to which, the product can absorb sound makes it possible for the product to absorb sound. It is made of polyolefin resin whose sound-absorbing effect is much better than that of conventional materials such as rubber and vinyl chloride.

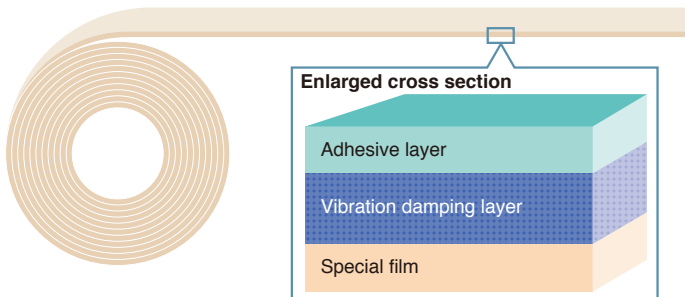


Features >>>

- Reduces the sound of rain by attaching the sheet to the back of metal sheets.
- Durable enough to be used for a long time.
- Easily installation thanks to adhesive backing.
- Greater performance compared with conventional materials including rubber and vinyl chloride.
- Starts to absorb sound and vibration as long as it is applied to about 30% of the total area of the front side of an object.

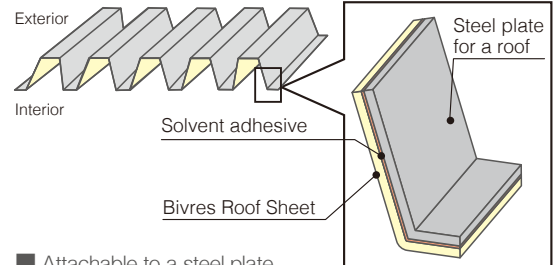
Specifications >>>

Sheet structure



*Thanks to this structure, the sheet has great durability and workability.

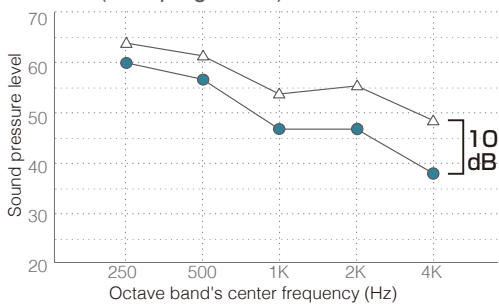
- Easily installation because this sheet has an adhesive side.



- Attachable to a steel plate
First, adjust the position of the adhesive side and the sheet, and then paste them together.

Performance

- Result of a noise test using an artificial rain-maker (Damping effect)



(Measuring conditions)

Precipitation

Measuring point: The backing of a triangular roof

<Legend>

△ :General folded-plate roof

● :General folded-plate roof partially laminated with Bivres Roof Sheet

Specifications

Product No.	Width (mm)	Length (m)	Thickness (m)	Remark
QN050D1	50	20	1	Separator with adhesive
QN060D1	60			

Sound-insulating sheet Bivres Floor Sheet

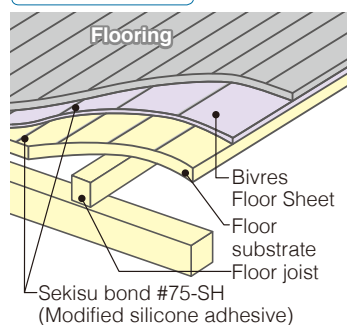
Sound-insulating sheet

A combination use of this product and Sekisui Bond#75-SH (Modified silicone adhesive) can enhance sound insulation performance between low and high frequencies, and especially cut sound above 1kHz.

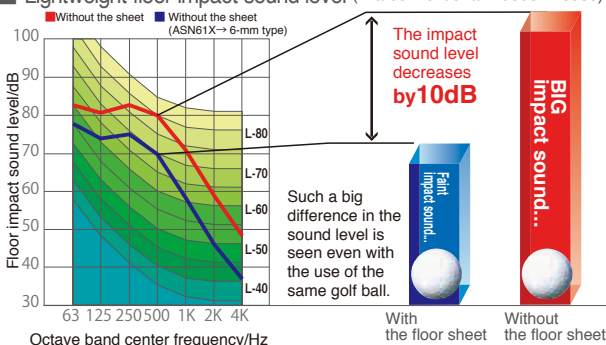
- * Sekisui Bond#75-SH is free from substances which are harmful to the human body so that it is safe for use.



Usage example



- Lightweight floor impact sound level (in a conventional wooden house)



Specifications

Item	ASN41X	ASN61X	ASN82X
Thickness(mm)	4	6	8
Size(mm)	910x910	910x910	910x455
Density(kg/m ³)	2.7	2.7	2.7
Weight per sheet	approx.9kg	approx.13kg	approx.9kg
Area density	11kg/m ²	16kg/m ²	22kg/m ²
Packing method	Flat stacking on a pallet	Flat stacking on a pallet	Flat stacking on a pallet
Unit per pallet	110	70	110



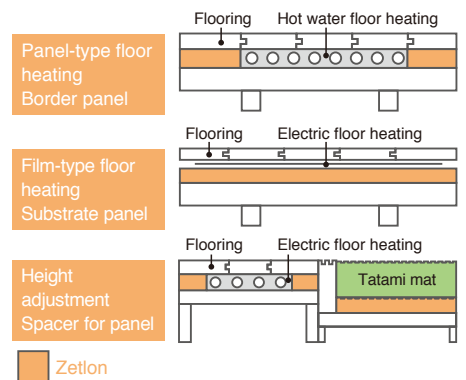
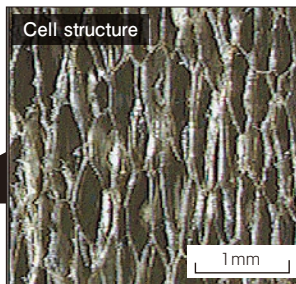
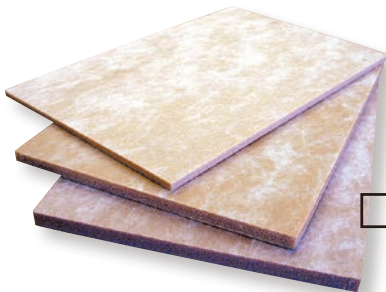
Easy and speedy flooring work without using plywood

Polypropylene foam board Zetlon®

This is a closed-cell foam board for use as a floor substrate, which is made mainly of polypropylene. It is light and flexible but strong against compression stress. Not only it can be easily cut with a cutter, but it can also attach to various kinds of materials because of its surface laminated with a PET nonwoven fabric, which allows for easy installation.

Purpose >>>

Polypropylene is one of the typical synthetic resins used in many applications including daily goods and automotive interior materials. And it also can be recycled to produce a new molded product.



Example >>>

It is applicable to various materials such as building and industrial ones, which require lightness, strength against compression stress, great workability and other features.



Features >>>

High strength in compression

Flat cells are aligned in thickness direction so that great strength in compression is realized.

Lightness

The weight of Zetlon is about one-sixth of that of plywood, which allows for easy removal.

Lineup

The thicknesses ranging from 3 to 20mm are available.

Adhesion

Attachable to surfaces of various kinds materials because of its surface laminated with a PET nonwoven fabric.

Flexibility

Flexible and hard to break so that it is suitable for bending work.

Workability

Cutable with a cutter. No electric equipment is needed.

Waterproofing

It seldom changes its size when exposed to moisture and rarely absorbs water.

Thermoformability

Its high melt tension allows for vacuum forming and press working.

Environmental safety

Its formaldehyde emission rate is below $5\mu\text{g}/\text{m}^2\text{h}$, corresponding to the highest grade of a product with F☆☆☆☆.

Specifications >>>

Specifications

Appearance		Size	Thickness
Color	Light brown	Width: 910mm Length: 1820mm	For floor substrates: 5.5, 9, 12mm Standard: 3, 4, 5, 6, 7, 8, 10, 15, 20mm
Form	Plate-like structure		
Cell structure	Closed-cell structure		

*Note: If you want some other sizes or thicknesses, please contact us.

Physical properties

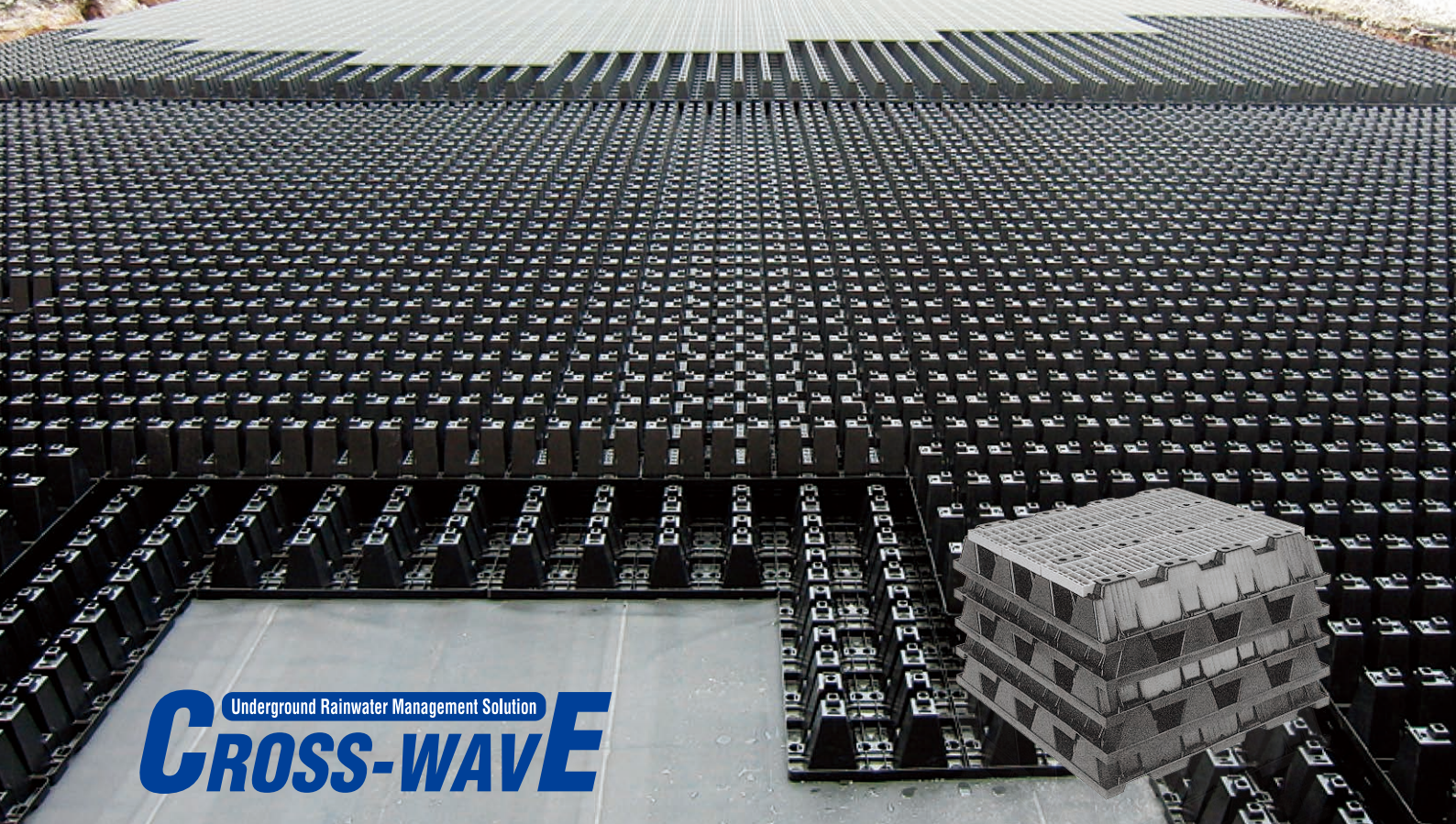
Item	Unit	Types (by product number)												Remarks
		ZNH0301	ZNH0401	ZNH0501	ZNH0551	ZNH0601	ZNH0701	ZNH0801	ZNH0901	ZNL1001	ZNL1201	ZNL1501	ZNL2001	
Thickness	mm	3	4	5	5.5	6	7	8	9	10	12	15	20	
Weight	kg/m ²	0.40~0.55		0.50~0.70			0.65~0.75			0.75~0.95			1.25	
Compression strength	MPa	0.75		0.65			0.55			0.45			0.40	JIS K 7220
Thermal conductivity	W/m·K	0.055	0.054	0.053			0.052			0.051				JIS A 1412
Softening point	°C	120~130												(DSC) Sekisui-unique method
Linear expansion coefficient	1/°C	6~9x10 ⁻⁵												Sekisui-unique method
Absorptivity	g/cm ²	0.0004												JIS K 6767
A grade for emission levels of formaldehyde		Corresponding to F☆☆☆☆ (A material not subject to notification)												JIS A 1901

*Data are only references : they are not guaranteed values.

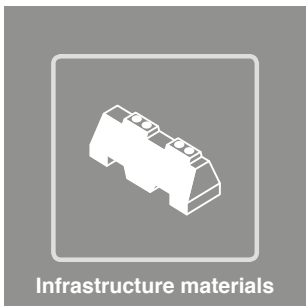
Example >>>



- Housing interior materials such as floor substrates, heat-insulating materials for floor-heating systems and the center layer of a tatami mat
- Various kinds of panels and core materials of a modular bathroom wall, partitions, bulletin boards and others.



Underground Rainwater Management Solution
CROSS-WAVE



High void ratio helping to prevent flooding in urban areas

Underground rainwater management solution **Cross-Wave**

Due to the increased frequency of intense storm events with more periods of drought, urban flooding from extra runoff as well as water shortage has become a severe issue in Japan and across the globe.

CROSS-WAVE is a modular solution of constructing underground stormwater attenuation, infiltration and rainwater harvesting system. Its simple design, high efficiency in storage capacity and easy of installation have led to thousands of underground tanks implemented at home and abroad for mitigating urban flood and help the utilization of rainwater resource.

Result >>>

Urban flood management

CROSS-WAVE can be used as a means of controlling urban runoff volumes. By efficiently draining the surface water in a controlled way, or allow it to soak into the ground, the risk of localized flooding as well as the load on existing drainage systems are greatly reduced.

Can be applied

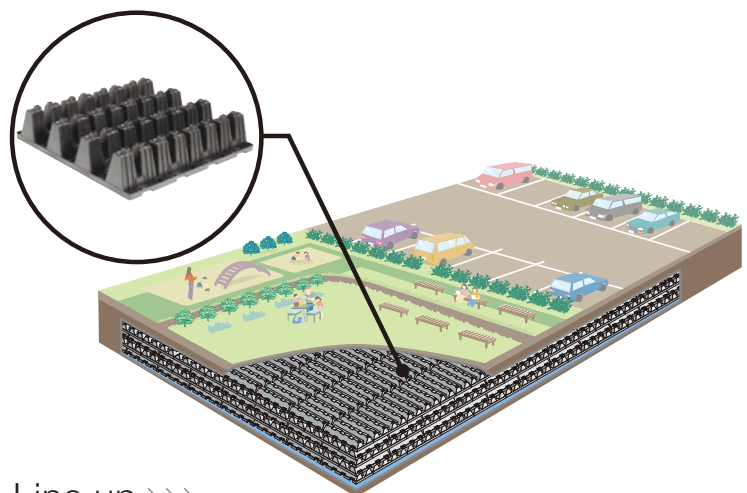
- Under open parks
- Under parking areas
- Under plazas of shopping malls
- School playground and etc.

Rainwater harvesting

CROSS-WAVE is ideally suited to stormwater harvesting occupying no surface area at all. The harvested water then can be used for industrial, agricultural or domestic water supplies.

Can be applied

- Under open parks
- Under parking areas
- In gardens
- Under farm road or green house
- School playground and etc.



Line up >>>

CW-H	CW-HS	CW	CW-S	CW-L

Five types are available with different applicable ranges for installation depth and earth cover depth designed to perfectly tailored to individual site requirements.

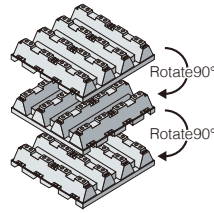
Features >>>

Benefits of CROSS-WAVE

CROSS-WAVE is a cost saving, effective way to control, store or harvest rainwater. Its stackable nature and light weight design simplifies delivery, site logistics and installation, making CROSS-WAVE an excellent alternative to current solutions.

1. High void ratio

- High space can be maintained by intersecting it at 90 degrees and piling it up.
- Reduce the amount of digging and can make a big volume storage in compact space.
- As digging is small so post processing is easy.



2. Time saving

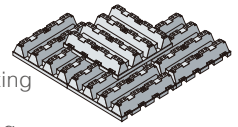
- Installation can be done only by hand.
- Compared to using concrete no need curing time.
- No need heavy equipment unlikely to use precasting concrete products.

3. Heavy load resistant design

- Can load 25 ton truck for vertical direction.
- 4m-6m installation depth.

4. Easy installation

- Due to slide layer design no fixing material is required.
- Installation speed is outstanding.



5. Eco-friendly

- Recycled polypropylene is used.
- Excellent chemical and water resistant, do not pollute the water.

6. Compact storage

- It can be easily stored if piled in the same direction and reduces storage space at the site.

Example >>>



Fukuoka: Elementary school rainwater reservoir (storage capacity: 800m³)



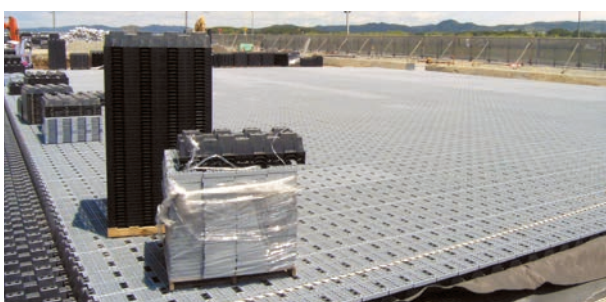
Aichi: Shopping center rainwater reservoir (storage capacity: 6,600m³)



Chiba: Residential land rainwater reservoir (storage capacity: 420m³)



Ishikawa: Rezoned land rainwater reservoir (storage capacity: 9,200m³)

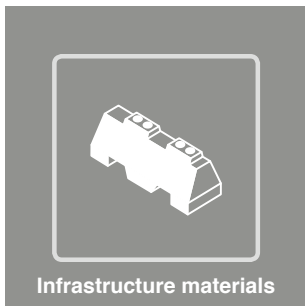


Miyagi: Government office rainwater reservoir (storage capacity: 1,700m³)





2016:NEXCO East Japan(Fukushima)



Simple, temporary access road material for soft soils

Fast, temporary access road construction

Plastic Road

Conventionally, a combination of pit sand, crushed stone, sleepers and steel plates has been used to construct temporary access roads in order to erect power lines and perform other public works in fields etc. However, this has posed a number of problems, including longer construction periods and the issue of restoring the site to its original condition and disposing of waste material following its removal. Plastic Road enables the efficient construction and removal of temporary access roads.

Performance >>>

Fallow fields	Can be used in fields after harvest.	Mountain areas	Suitable for confined areas where installation without machinery is necessary
Sand	Proven a track record on sand, including man-made beaches etc.	Indoors	Can also be used in gymnasiums and event halls
Waterways	Can be cleanly removed without polluting waterways	Other	Can be used in times of emergency, such as natural disasters etc.
Construction sites	Can also be used as a temporary access road for confined construction sites		

Installation procedure >>>

1. Laying plastic road
2. Laying the spacers
3. Laying steel plates over the top

Features >>>

Ground reinforcement

High water permeability delivers excellent ground reinforcement

Safety

Staggered arrangement structure provides increased safety

Strength

Permits passage of large dump trucks and 50t rafter cranes

Versatility

Extremely versatile and can also be used as a foundation for stockpiling materials or portable toilets

Easy installation

Plastic Road's lightweight and simple design makes it easy to install without machinery

Eco-friendly

Compact and easy to transport, drastically reducing CO₂ emissions

Prevents ground subsidence

Load distributing design helps to prevent ground subsidence and compression

No need for site restoration

Site can be easily restored back to arable land.

NETIS Registration number : KT-100053-VR

This product is registered at the national ministry of transport NETIS.

Specifications >>>

Item	Plastic Road		
	Full size	Half size	Spacer
Dimensions (mm)	994x994x180	994x494x180	993x246x45
Weight (kg)	6.5	3.3	1.4
Vertical load bearing capacity (kN/m ³)	90	90	-
Material	Recycled polypropylene		

Example >>>



2007: Overhead power cable installation (Niigata)



2011: Overhead power cable installation (Fukushima)



2017: Solar power system installation (Fukushima)



2016: Overhead power cable installation (Kumamoto)

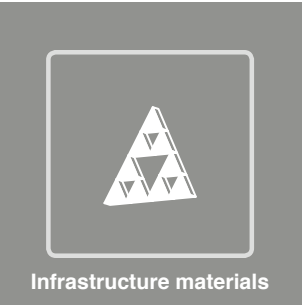


Kyoto University x Sekisui Chemical Co., Ltd.
 Product developed by cooperation between industry and academia

 **GOOD DESIGN** Received in 2011

"Airyshade" won the GOOD DESIGN AWARD 2011 from Japan Institute of Design Promotion.
 It was highly praised as a product which can alleviate the urban heat island phenomenon by dramatically reducing radiant heat, one of the causes of the phenomenon without using water and electricity.

NETIS Registration number : KT-140052-A
 This product is registered at the national ministry of transport NETIS.



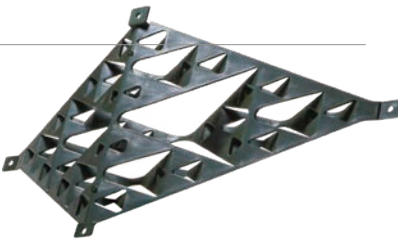
Feel comfortable as if you took a rest under the shade of a tree !
 This is a fractal sun shade with a unique stereostructure

New concept sun shade Airyshade

Airyshade is a fractal sun shade which adopts the new idea of putting together three-dimensional pieces, which are invented based on a tree structure. One of its features is that it is a three-dimensional product with many openings on, which makes it possible to give a sense of spaciousness and create an airy place.

Product >>>

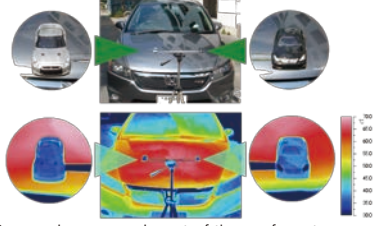
A fractal three-dimensional piece is the best characteristic.
 The three-dimensional structure has been contrived by reference to a tree structure which is seemed to be a geometrically overlapping arrangement of many leaves of a tree. By putting the pieces together, an airy place as if it were the shade of a tree is created.



Fragment

A small thing like a leaf tends to store little heat.

Compared with a minicar parked under a tree and a passenger car under a tree, the minicar stores less heat. A small thing absorbs less light than a big one because of its small surface, which shows it does not get hotter than the big one.



Stereostructure

Three-dimension structure that looks as if leaves were laid on top of each other.

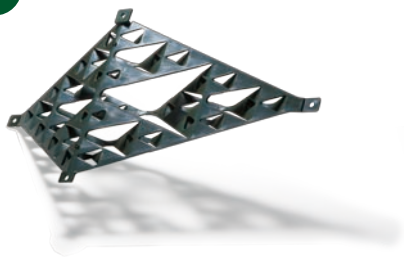
A place covered with materials that do not breathe like a tent get hot, while a place under a tree is airy and cool. The adopted fractal structure lets the air in and out smoothly.



Material trait

A material which do not easily transfer nor absorb heat is used.

Airyshade does not get hot even if it is exposed to sunlight. Because a material, which is used in a basic piece, do not easily transfer nor absorb heat.



Features >>>

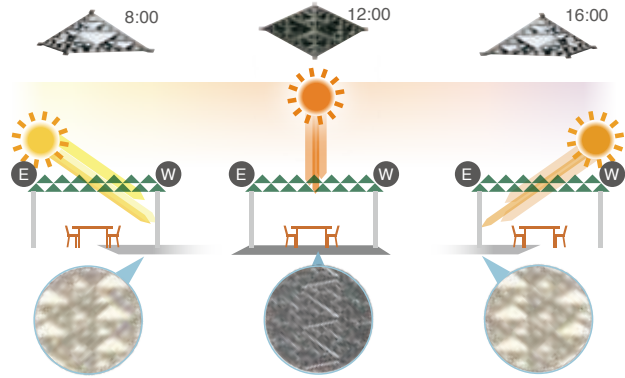
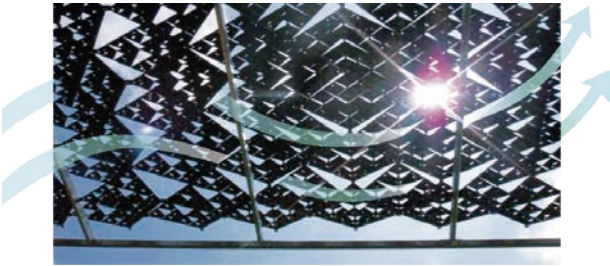
Excellent heat shielding effect !

Use Airyshade to turn strong sunshine to one filtering through the leaves.

It blocks the strongest sunlight in the daylight, but passes gentle sunlight in the morning and evening through. It is designed to block the strong sunlight based on the assumption of the strongest sunlight in the summer. About 95-percent near-infrared light, which causes a scorching heat, can be cut. On the other hand, it provides an epoch-making system that can take in much light in the winter when the sun is at a low altitude. You can enjoy a comfortable living environment throughout the year.

Airy and Great heat dissipation !

The three-dimensional Airyshade with many openings on creates a feeling of spaciousness and a well-ventilated place. It also releases heat and lets the fresh air in and out even in summer.



Enjoy peace and comfort created by the geometrically patterned shades !

You may associate a sunshade with a dark place under it. But the place under Airyshade is so bright that you will feel a sense of spaciousness. And furthermore, seeing the geometrically patterned shades on the ground makes you feel cool.



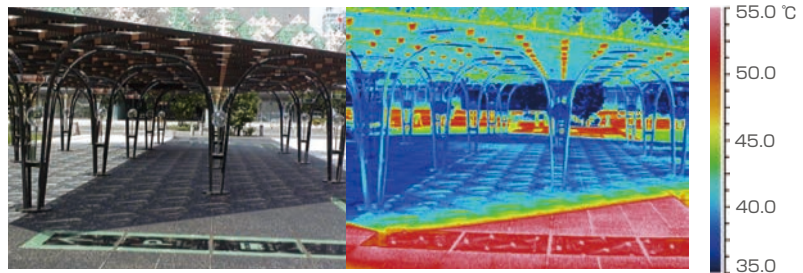
Cool places are created in urban areas without watering and electricity.

It is difficult to plant many trees on the roofs of buildings in urban districts. But with Airyshade, cool places like the cool shade of a tree can be created even there. Unlike rooftop greening, neither watering nor electricity is needed once it is installed.

Thermographic measurement in Odaiba, Tokyo

Area: About 250m² /
Period: June 24.2009 - August 31.2009

It turned out that the ground under the roof covered with Airyshade was relatively cool.



Example >>>



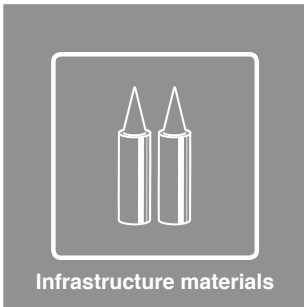
Park



Hospital/Nursing-care facility



Rest stop



S-Dine® Joiner-W is an adhesive joint filler made from a combination of epoxy resin and other special materials for concrete structures.

Adhesive joint filler S-Dine® Joiner-W

S-Dine Joiner-W boasts unique properties, delivering superior adhesion, even on wet surfaces and hardens underwater making it suitable for underwater applications. To date, work to completely seal sewage lines and tunnels etc. was extremely expensive, labor intensive and required long construction periods. Further, using mortar or quick-setting cement as a sealant often resulted in cracks that required repair work over the short term. S-Dine Joiner-W is extremely easy to use, solving all these problems at once. It also makes sealing concrete cement in areas where the flow of water is strong much easier.

Result >>>

Joint filler/Sealant

Joint filler and sealant for use on concrete joints in shield segments, seawalls, tunnels and underground structures etc.

Repair of cracked/damaged areas

Repair of concrete structures, such as waterways, dams, water treatment plants, tanks, Hume pipes, and underground structures etc.

Underwater adhesive

Bonding and repair work on wet surfaces and rock and concrete in fresh and saltwater applications.

Anti-corrosive coating

Anti-corrosive coating steel harbor structures, such as seawalls and piers etc.



Features >>>

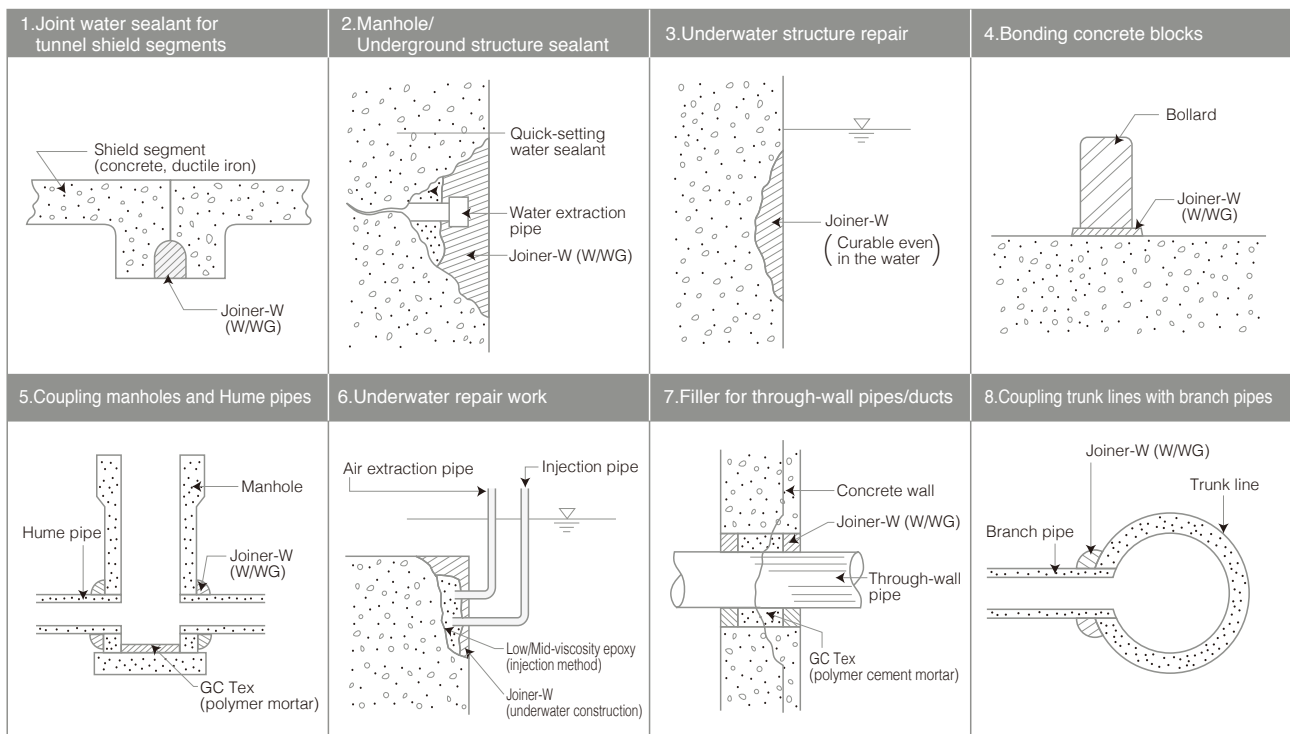
Can be used as an adhesive on wet surfaces

Will harden in fresh and salt water. (Joiner-W)

Easy to use with no prep needed

Economic and looks great

Example >>>



Specifications >>>

Product & Properties

Item	Joiner-W	Joiner-WG
Wet surface adhesive	Excellent	Good
Underwater construction	Excellent	NG
Pot life (20°C)	40-60 mins	
Curing time (20°C)	24hr	
Application method	Hand	Grease gun, spatula, trowel
Blend ratio	Base compound (A) : Curing agent (B) = 1 : 1	
Packaging	10kg set: Base compound (A) 5kg + Curing agent (B) 5kg	

General properties

Item	Joiner-W		Joiner-WG	
	Base compound (A)	Curing agent (B)	Base compound (A)	Curing agent (B)
Appearance	Greyish-white putty	Grey putty	Greyish-white putty	Grey putty
Main component	Epoxy	Polyamide amine	Epoxy	Polyamide amine/Cycloaliphatic polyamine
Shrinkage reduction ratio	1% or less		1% or less	
Thermal reaction				
Specific gravity of cured product	1.6±0.1		1.7±0.1	

■ S-Dine Joiner-W can also be supplied in blue as a special order product.

■ S-Dine Joiner-WG forms a soft putty when machine-mixed (mixer etc.)

■ S-Dine Joiner-W comes in the form of a clay-like paste that can be hand-mixed.

*Data are only company standards; they are not guaranteed values.

Highly resistant and super durable grounding resistance reducing agent

DOUDEN CRETE

DOUDEN CRETE(DCS-010,DCB-020) is a high performance grounding resistance reducing agent developed by Sekisui Fuller Co., Ltd. by applying blending and mixing technologies of various inorganic materials and an epoch-making reducing agent having a strength comparable to that of concrete and super durability.

DOUDEN CRETE is made by distributing carbon fibers as conductive material on an inorganic compound consisting mainly of cement. Therefore, it preserves stable performances for a long time without any risk of corrosion or dissolution in water of itself.

DOUDEN CRETE preserves its grounding resistance reducing effect for a longtime and thus contributes eventually to a reduction of the costs of construction works.

No corrosion of grounding electrodes.

Excellent strength comparable to that of concrete.





Adhesive which takes both the environment and health into consideration. This is one of the Sekisui Chemical's highly recommended products.

Modified silicone Adhesive

The modified silicon adhesive can be used in temperature from - 50°C to 90°C . And, compared with other adhesives, it is so flexible that it can adhere to more things including tiles and flooring.

It also has recently been used widely in vehicles, vessels, building materials and industrial ones.

Sekisui Bond #55-S (for floor joists and flooring including one with floor heating system)

Ideal for bonding floor joists, timber flooring materials and steel/plastic floor joists etc. JAIA F ☆☆☆☆ JAIA 4VOC standard

Features >>>

- Highly efficient one-part adhesive for bonding floor joists and performing floor finishing work.
- Effective in preventing floor from creaking caused by other adhesives.
- Less odor, making it friendly to workers and the environment.
- Easily removed when applied to unnecessary floor surface areas etc.
- Highly viscous mastic adhesive that serves as filler on uneven surfaces.
- Great durable and highly resistant to shock and vibration when it hardens. Which makes it possible to relax expansion and contraction stresses on the adherend.



Does not foam, preventing creaky floors

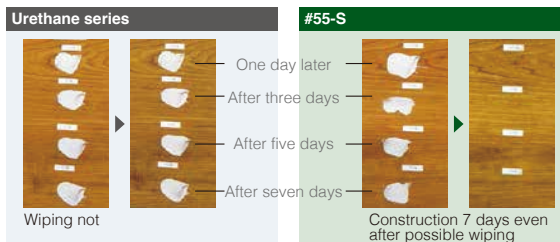


Sekisui Bond #55-S



Urethane adhesive (foaming)

Modified silicone-based # 55-S series, wiping possible even after curing

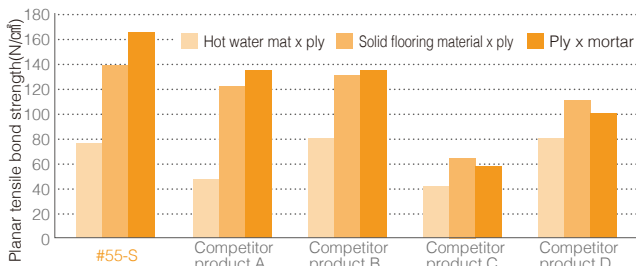


Applications >>>

- Bonding the joists to the floor frame using two-by-four construction and other conventional floor construction methods.
- Bonding timber flooring to timber floor frame materials, such as plywood and particle board etc.
- Bonding with panels of installed floor heating.
- Laying dual-layer flooring. ■ Bonding steel/Plastic floor joists.

Specifications >>>

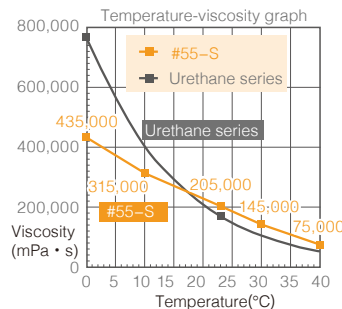
Superior adhesive strength



Superior adhesive strength

Comparison of two adhesives for flooring - Changes in viscosity

Sekisui bond #55-S is smoothly pushed out even under low temperatures, and does not get sticky so much nor leak out of the container while in use.



Volume/No. of packages

Volume	No. of packages
500ml sausage (750g)	20 pcs./box

Standard usage

Floor Heating System 200g/m²

Sekisui Bond DG-A **One component moisture cure**

Tenacious adhesion



Features >>>

- Secure bond before curing with high viscosity.
- High adhesiveness, high elasticity.

Applications >>>

- Sealing and bonding for buildings, automobiles and container industry.
- Sealing gaps and expansion joints. ■ Structural bonding for vibrating constructions.

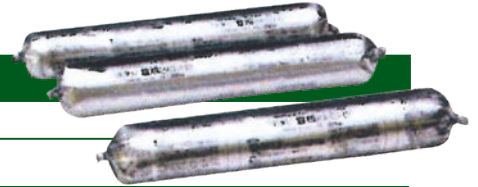
Volume/No. of packages

Volume	No. of packages
500ml sausage (750g)	20 pcs./box

Standard usage
20m (Φ5mm) / pcs.

Sekisui Bond # 75-SH **One component moisture cure**

Multi-purpose adhesive JAIA F ☆☆☆☆ JAIA 4VOC standard



Features >>>

- Multi-purpose adhesives with high strength.
- With the plasticizer-free formula, the adhesive would least contaminate the substrates.

Applications >>>

- Wood floor adhesion. ■ Fixing metal plates.
- Various interior parts adhesion, decorative plates, doors, wall plates, ceiling panels, etc.

Volume/No. of packages

Volume	No. of packages
400ml sausage (600g)	20 pcs./box

Standard usage
Floor 200g / m ² Wall 250g/m ²

Sekisui Bond # 77EX2 **One component moisture cure**

For exterior tiles JAIA F ☆☆☆☆ JAIA 4VOC standard



Features >>>

- High strength suitable for exterior tiles requiring high durability.
- Easy tile construction without temporary fixture.

Applications >>>

- Exterior tile adhesion. ■ Irregular wall surface filling.

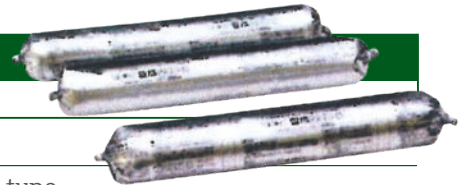
Volume/No. of packages

Volume	No. of packages
2kg sausage	9 pcs./box

Standard usage
1-2kg/m ²

Sekisui Bond # 95 **One component moisture cure**

For wood flooring JAIA F ☆☆☆☆ JAIA 4VOC standard



Features >>>

- Low-viscosity type for notched trowel. ■ Must try it! Easier use than PU type.
- The usage can be reduced as notched trowel creates sharp "V" edges. ■ The adhesive will not stain the skin.

Applications >>>

- Wood floor adhesion.

Volume/No. of packages

Volume	No. of packages
500ml sausage (750g)	20 pcs./box

Standard usage
Floor 300g-600g/m ²



Sealant for interior and exterior work, which takes both the environment and health into consideration. This is one of the Sekisui Chemical's highly recommended products.

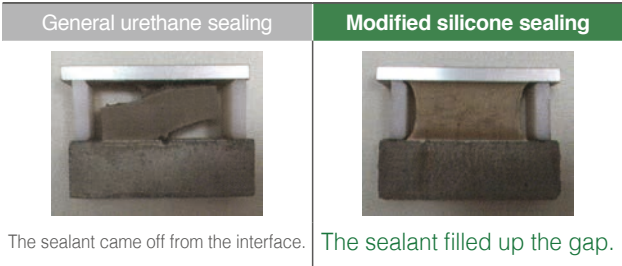
Sealant

Modified silicone

With the Sekisui's unique compounding technology using high weather-resistance modified silicone polymer, this sealant achieves the highest resistance to weather in the industry.

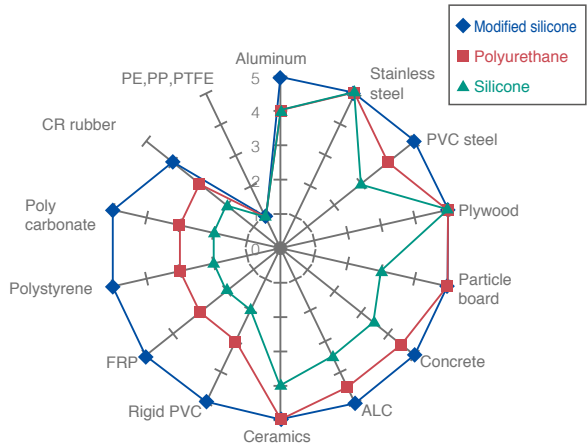
Features >>>

- No hazardous chemicals.
- Almost odorless, which makes it possible for residents to stay at the home during interior renovation work.
- Attaches to various adherends. And, with an excellent function of filling up gaps, it sticks well to different materials and even to irregular surfaces.
- Turns into an elastic rubbery foam after cured, which absorbs external stress and realizes a stable adhesion for a long time.



[Measuring conditions]
A gap was filled using each of the sealants and then stretched two times.

Adhesion wide variety of materials

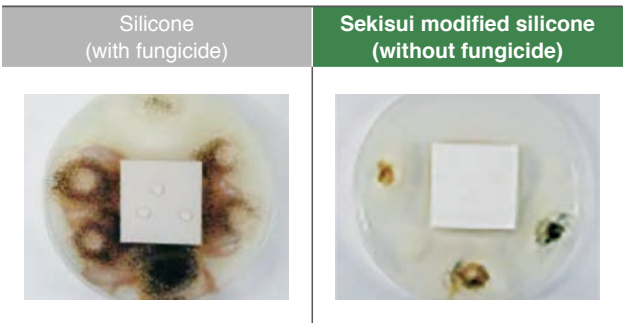


Performance after cure

Item	MS	Polyurethane	Silicone
Weather-resistance	Excellent	Poor	Excellent
Durability	Excellent	Fair	Excellent
Heat-resistance	Good	Fair	Excellent
Wide range bonding	Excellent	Fair	Poor
Sound or deformation absorption	Excellent	Fair	Good
Staining	Good	Good	Poor
No bubbling	OK	Bubbles	OK
Paintable	Yes	Yes	No

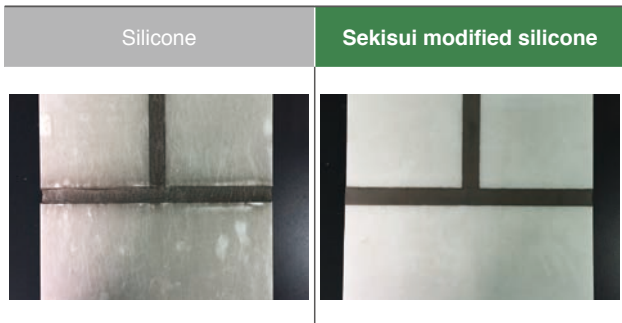
Specifications >>>

Mold-proof property



The material itself has mold-proof property (JIS Z2911 mold resistance test).

Least bleeding



The area surrounding the joint gap will not be contaminated by silicone oil.

Sekisui Sealant MS LM-P **One component moisture cure**

Exterior sealant



Features >>>

- Highly excellent weather resistance/ durability. No color change, no cracks for long years.
- Friendly to the job site and global environment.
- Paintable. ■ No bubble issue like polyurethane sealant.

Applications >>>

- Sealing of joints for exterior walls.

Volume/No. of packages

Volume	No. of packages
500ml sausage (750g)	20 pcs./box

Standard usage
5m (Φ10mm) / pcs.

Sekisui Bond # 72-A **Quick curing Type (compared with the other types) One component moisture cure**

Multi-purpose adhesive/sealant JAIA F ☆☆☆☆ JAIA 4VOC standard



Features >>>

- Multi-purpose type for both adhesion and sealing.
- Robust adhesion to the substrates with proper flexibility.

Applications >>>

- Adhesion to wood flooring.
- Adhesion to various interior parts, decorative plates, doors, wall plates, ceiling panels, etc.
- Various interior sealing. ■ Adhesion to insulation panels.

Volume/No. of packages

Volume	No. of packages
330ml cartridge (500g)	10 pcs./box
500ml sausage (750g)	20 pcs./box

Standard usage
Floor 200g/m ² Wall 250g/m ²

Sekisui Bond # 72-K **One component moisture cure**

Mildew-proofing adhesive/sealant JAIA F ☆☆☆☆ JAIA 4VOC standard



Features >>>

- General purpose adhesive and sealant.
- High mildew proofing ability .

Applications >>>

- Various sealing for washstands, bathroom, kitchen, toilet.

Volume/No. of packages

Volume	No. of packages
330ml cartridge (500g)	10 pcs./box

Standard usage
12-13m (Φ5mm) / pcs.

Sekisui Sealant MS LM-OS **One component moisture cure**

Exterior sealant



Features >>>

- Sealing with high elongation, high weatherability and low contamination properties.
- Waterproofing the joints, and maintaining the superior appearance of the building.

Applications >>>

- Exterior joint sealing.

Volume/No. of packages

Volume	No. of packages
500ml sausage	20 pcs./box

Standard usage
4.2m (10mm x 10mm joint)



Eco-friendly, super strong double-faced bonding tape

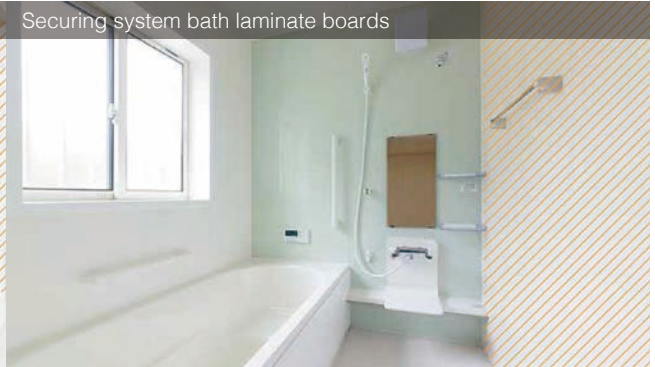
Strong bonding tape

SEKISUI SJ

This is a strong type of double-faced tape.
It can be used in a wide range of applications.



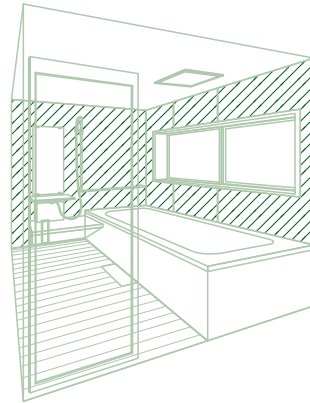
Securing kitchen panels, particle board



Securing system bath laminate boards



Securing vanity basin laminate boards

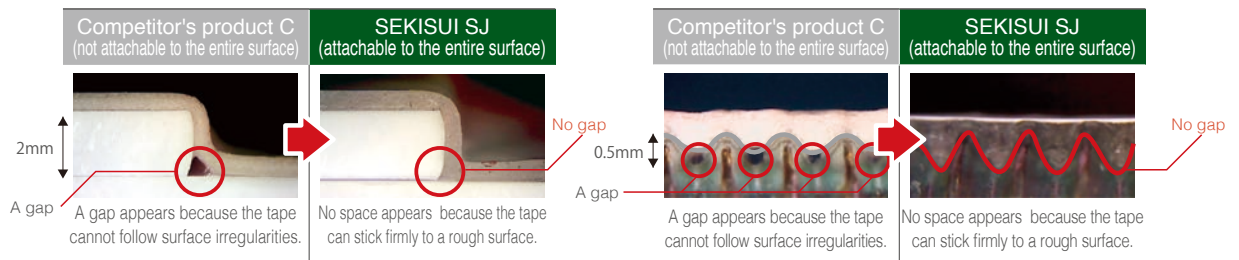


- Other applications**
- For fixing a thermal insulation material
 - For fixing plasterboard
 - For fixing flooring
 - For fixing a center rib of a door

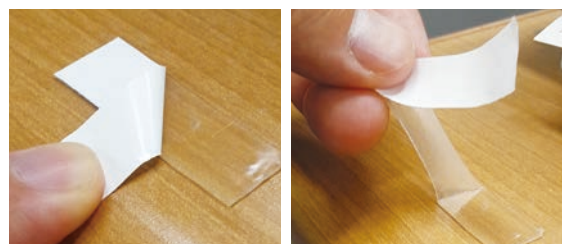
Features >>>

Uneven surface

Tightly attachable to an uneven surface and a soft adhesive layer

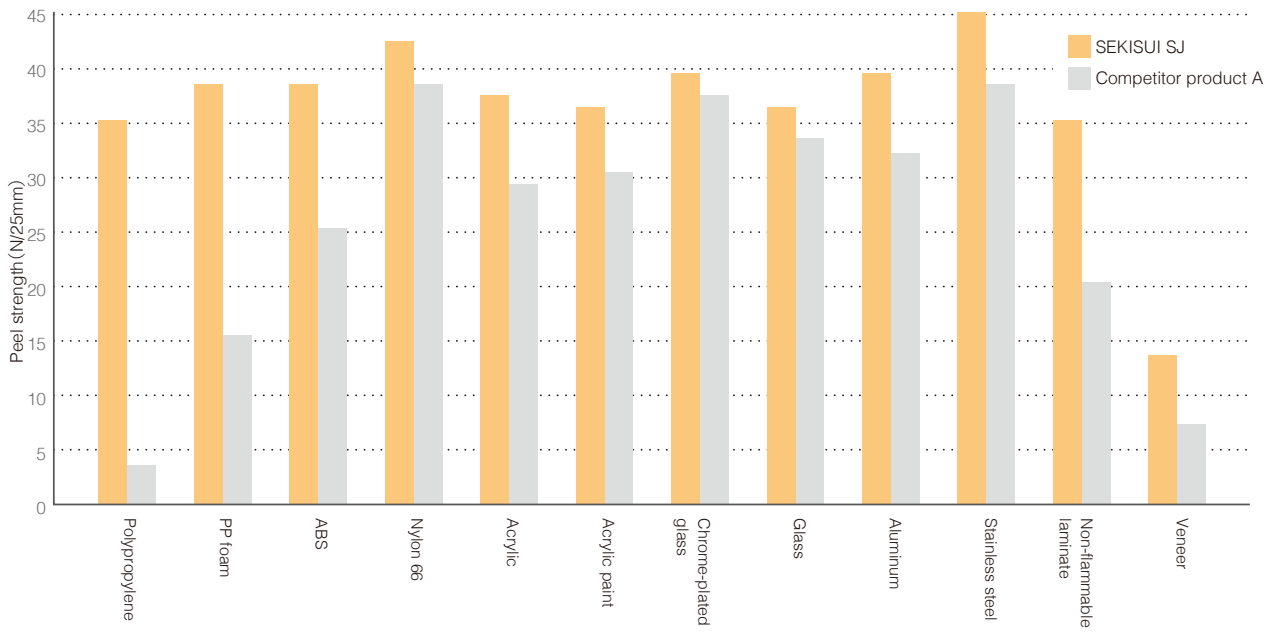


- Single layer of acrylic resin that is flexible strong
- Adherent to low polarity material including PP and nylon
- Good adhesion to rough surface such as plywood
- Adhesive to oily surface
- Good weatherability and heat & water-resistance
- Do not use 13 substrates including toluene and formaldehyde

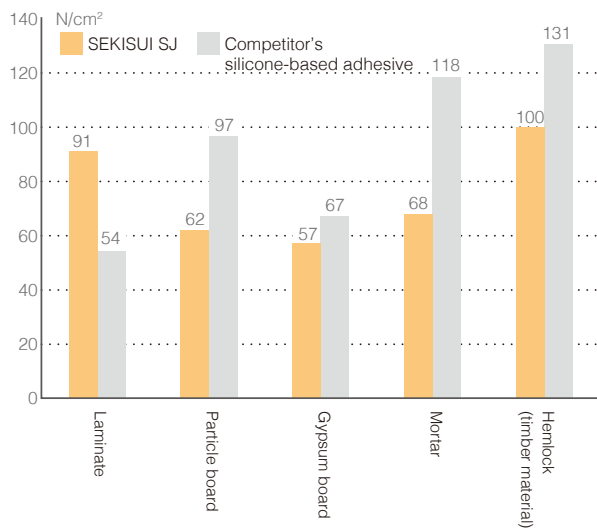


Result >>>

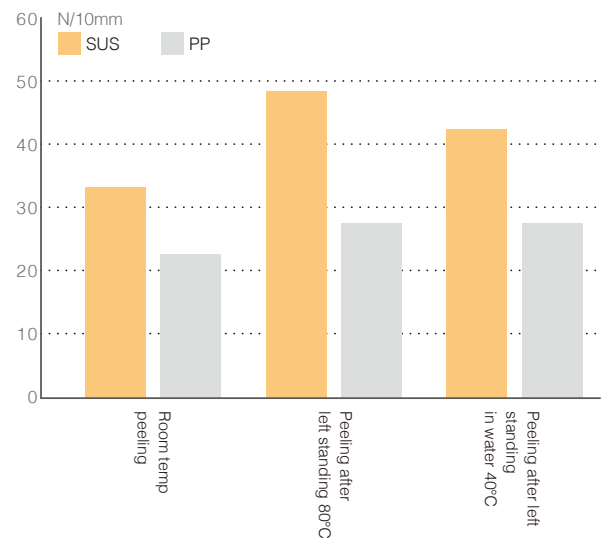
Adhesive strength by materials



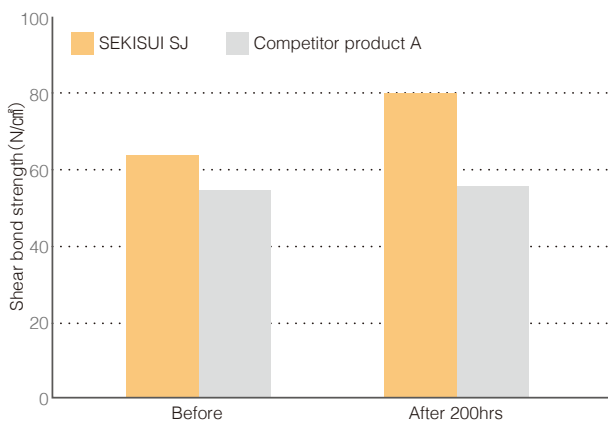
Stuck to the bottom of stainless foil – Cured for 3 days at 23°C



Heat & water resistance



Change in adhesive strength due to weather exposure

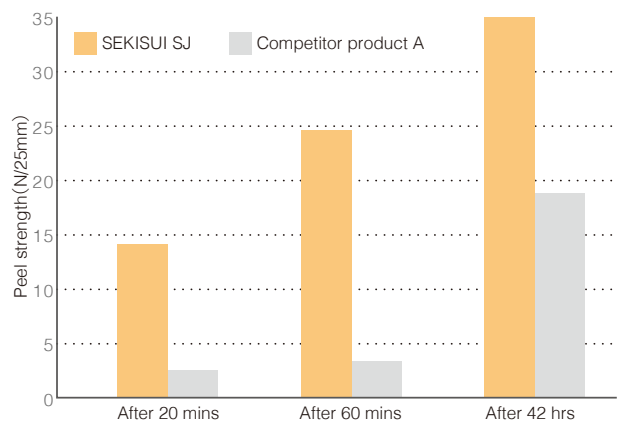


<Measuring conditions>

Sample: Transparent acrylic (t2mm)/coated steel sheet, affixed 20x20mm, irradiated from acrylic surface

Weather exposure ASTM23→ Shear adhesion test speed: 50 mm/min

Machine oil contaminated surface adhesion test



<Measuring conditions>

Sample: Contaminated with machine oil #32 1 g/m²

Peeled at angle of 180°C, peel speed 50 mm/min, backed with 0.5 mmPET

Data are only references; they are not guaranteed values.



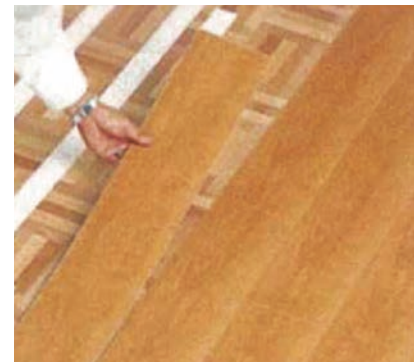
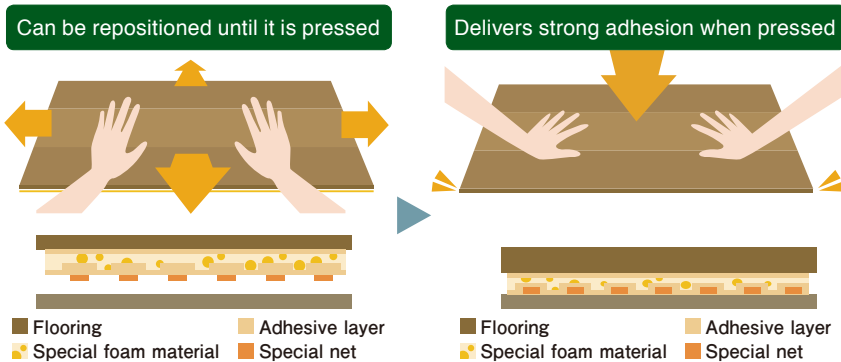
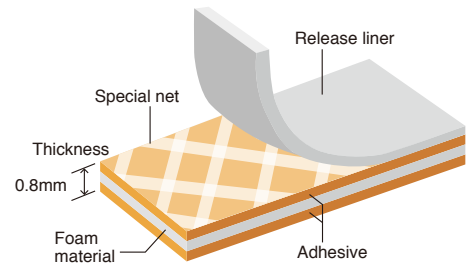
Double-faced tape allowing for easy positioning, which can stick to building materials only when pressed.

Adjustable Double-faced Tape 530

It is a double-faced tape that can be repositioned, making it suitable for dry flooring systems.

Features >>>

- Positional adjustment is easy due to our special net laminate structure. The solvent-free design means no curing, enabling fast installation.
- It can be removed without sticky residue when the time comes to replace the flooring.
- The flexible base material adheres well to uneven surfaces, ensuring a large adhesion surface area. This helps to provide sufficient adhesion to rough or irregular surfaces. The tape also uses a highly durable acrylic adhesive for a reliable result.
- 530 does not contain organic solvents or toxic formalin as is often the case with adhesives.



Can be repositioned as the adhesive is not activated until it is pressed.

Delivers strong adhesion once pressed.

Specifications >>>

Physical properties

Item	Unit	Measurement	Remarks
Adhesion (stainless steel)	Front	N/25mm	41.0
	Back (net)		
Rolling ball tack test	Front	1/32"	30
	Back (net)		
Holding performance (stainless steel, 40°C)	Front	mm	0.4
	Back (net)		
Shear adhesion	N/cm ²	31.9	Sekisui-unique method

Adhesion by material

Item	Unit	Measurement	Remarks
Plywood	Front	N/25mm	61.25
	Back (net)		
Gypsum board	Front	N/25mm	15.6
	Back (net)		

*Data are only references; they are not guaranteed values.

Product size

Tape thickness	Tape width	Tape length
0.8mm	950mm	10m/20m



A double-faced tape for interior work The tape can fix even soft polyvinyl chloride.

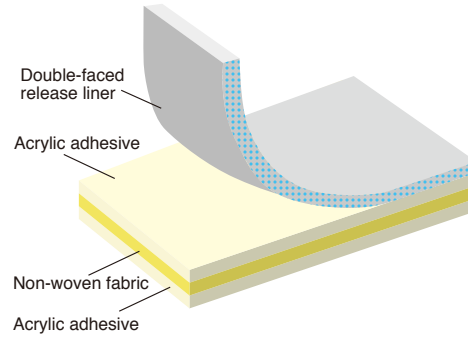
Plasticizer-resistant Double-faced Tape 577SA-L

This double-faced tape can stick firmly to soft polyvinyl chloride, which easily peels off when conventional tapes are used.

In addition, since it is also designed to reduce VOCs emissions, it is eco-friendly.

Features >>>

- No thirteen substances, which are designated to be harmful to the human body by Japan's Ministry of Health, Labor and Welfare, is used.
- Prevents a decrease in its adhesive strength when the tape is attached to an adherend containing plasticizers such as soft polyvinyl chloride.
- Heat-resistance
- Plasticizer-resistance
- Low VOC

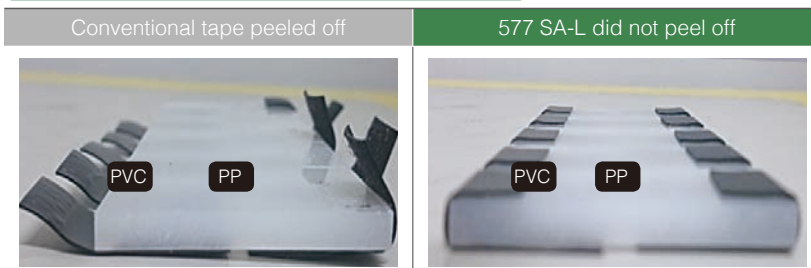


Specifications >>>

Physical properties

Tape thickness (mm)	0.13	-
SP adhesive (N/25mm)	18.9	In accordance with JIS Z 0237
PP adhesive (N/25mm)	12.2	180° peel test (Speed of peeling rate 300mm/min.)
80°C holding power (mm)	0.4	The misalignment was assessed after one hour of the test.
Shearing stress (N/cm ²)	178	Speed of peeling rate 200mm/min.

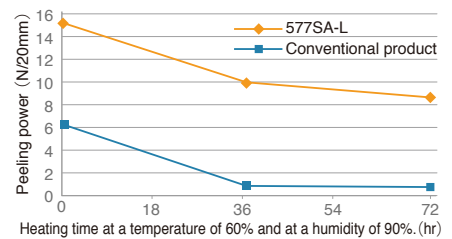
Anti-repulsion resistance test using PP and soft PVC



Test method

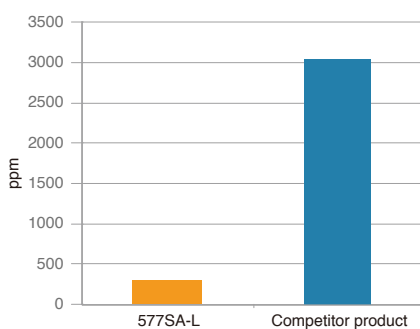
PP and soft PVC were put together, and it was placed at a temperature of 60°C and at a humidity of 90% for two weeks.

Adhesion by flexible polyvinyl chloride

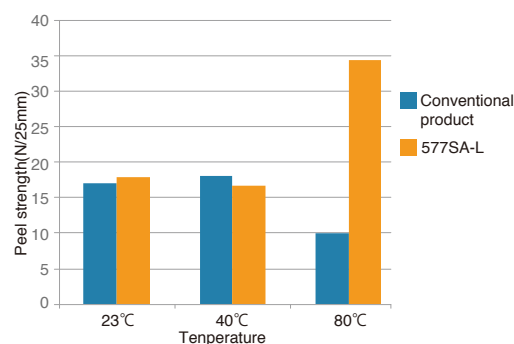


577SA-L remained strong adhesion after attached to soft PVC.

TVOC performance



Adhesion by temperature





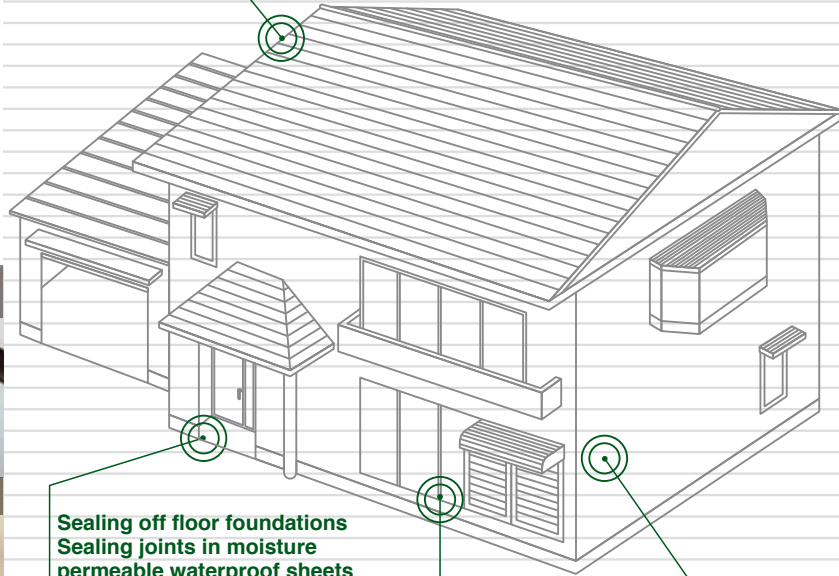
747WT is recommended tape by NYG (Japan Fiber Reinforced Cement Sidings Manufacturers Association)

Air-tight waterproof tape **747WT**(double-faced tape) **740**(single-faced tape)

747WT and 740 are both acrylic, air-tight waterproof tapes used to seal off gaps around the house and the joints between connecting parts.



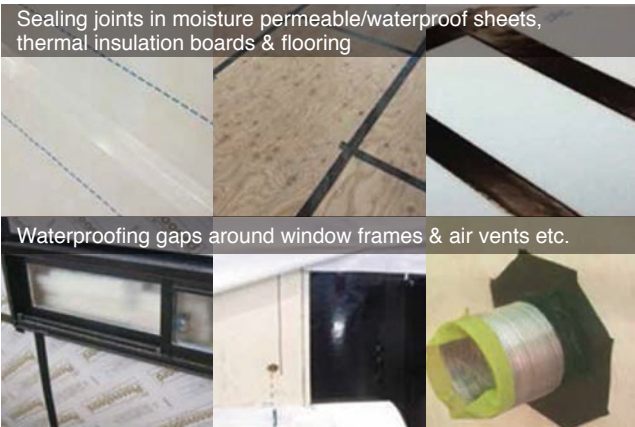
Waterproofing joints in the roof framework



**Sealing off floor foundations
Sealing joints in moisture permeable waterproof sheets**

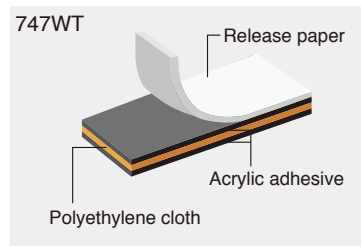
Waterproofing gaps around window frames etc.

Sealing joints in thermal insulation boards and 2x4 panels

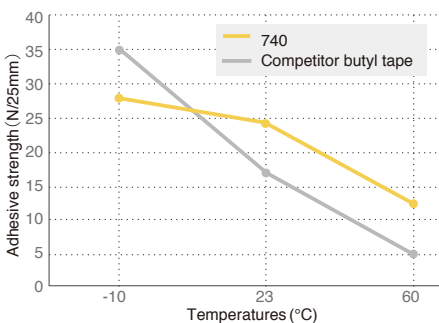


Features >>>

- It is easy to cut by hands.
- The workplace and hands are not stained because of the Acrylic adhesion.
- Airtight waterproof tape (D/S and single faced tape) can use in wide range of temperature from -10°C~ 60°C .

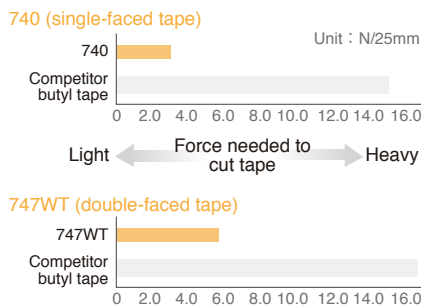


Adhesion



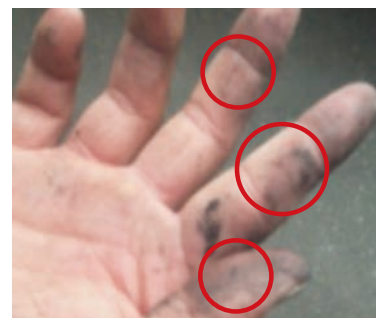
Compared with butyl tape, these tapes' adhesive power is not susceptible to temperature changes, making it possible to remain stable adhesion.

Easy cut



The tapes can be cut more easily and more smoothly by hands than butyl one, which improves workability.

Staining by butyl tape(competitor's)



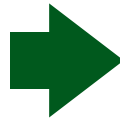
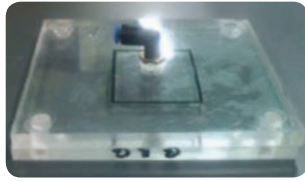
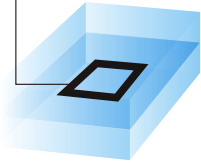
No risk of secondary damage such as getting users' hands dirty because the tapes are designed to avoid staining something

Properties >>>

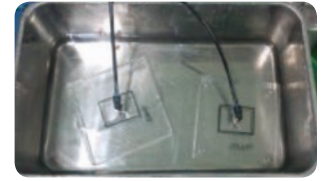
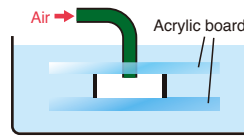
Excellent airtightness

Waterproof test

Test tape cut into a frame shape (2x40x54mm)



30kPa ≙ Water pressure of a 3-meter depth



Put the test tape between two acrylic boards. And then apply a pressure of 4kg per square meter on it for 7 seconds. Finally, leave it at normal temperature for one day.

Put it in the container filled with water, and then calculate how long it will take for air to leak out of it.

Item	Normal temperature (23°C)		40°C	
	Sekisui's acrylic double-faced tape	Company A's butyl double-faced tape	Sekisui's acrylic double-faced tape	Company A's butyl double-faced tape
IPX7	>30min	15min	>30min	68sec
IPX8	>30min	30sec	4min	1sec

IPX7: No damage even if water gets inside a product. This standard is applied to home appliances including mobile phones.

IPX8: A product, even though sunk under water, can be used.

The Sekisui's tape ensures greater waterproofing property at normal temperature and at 40°C.



- Suitable for sealing a joint between a waterproof-breathable sheet and a thermal insulation board.
- Suitable for use in a gap around window frames, air vents and other openings in a building, where water proofing is needed.

Specifications

Item	Width (mm)	Thickness (mm)	Length (m)	Color	No. of rolls per carton	
747WT	50	0.22	20	Black	30	
	75				24	
	100				18	
740	50	0.16		20	Black/White	30
	75					24
	100					18

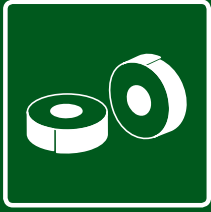
General properties

Item	Adhesive strength (N/25mm)	Tack ball No. (1/32")	Tensile strength (N/10mm)	Elongation (%)
747WT	21	27/29	40	20%
740	20	25	34	16%

Physical properties

Item	Sample	Temperature (°C)	NYG standard	747WT (N/25mm)	Result
Adhesive strength	SUS	60	3.0N or more	10	Good
		23		21	
		-10		24	
	Hemlock	60		19	
		23		43	
		-10		24	
	Moisture-permeable waterproof sheet	60		11	
		23		20	
		-10		12	
Holding force		60	5mm or less	0	Good
Adhesion stability		23	No leak	None	Good
Durability	SUS	23	2.5N or more	41	Good
	Hemlock			40	
	Moisture-permeable waterproof sheet			26	
Staple water leak test (reference)		-10		None	

*Data are only references: they are not guaranteed values.



Adhesive / Tape

Easy to cut by hands, bringing about excellent workability.

Masking Tape

Our masking tapes are suitable for use in construction sites (indoor or outdoor) and usable without damaging flooring or other building materials.

Spatt Light Tape 733

For holding and securing sheets on timber flooring.

Features >>>

~For construction use and flooring~

- Easy to cut by hands
- Leave little adhesive residue in various working environment



Specifications

Color	Width (mm)	Length (m)	No. of rolls per carton
Green	38	25	36
	38	50	30
	50	25	30
	50	50	30
Semi-transparent	50	25	30

Physical Properties

Item	Unit	#733
Tape thickness	mm	0.11
Adhesive strength	N/10mm	2.1
Tack	Ball No.	16
Tensile load	N/25mm	1.4
Tensile strength	N/10mm	36
Elongation	%	19

Smart Cut Tape 833

Flexible, easy to tear film

Features >>>

~For flooring~

- Excellent flexibility and well attached irregular surfaces
- Easily and smoothly pulled out help users finish their work more quickly
- Variety of the colors and able to write on the tape



Specifications

Color	Width (mm)	Length (m)	No. of rolls per carton
Orange	38	25	36
	50		30

Physical properties

Item	Unit	833
Tape thickness	mm	0.12
Adhesive strength	N/10mm	2.2
Tack	Ball No.	12
Tensile load	N/25mm	1.4
Tensile strength	N/10mm	46
Elongation	%	23

*Do not apply these tapes to plain wood, otherwise pollution may occur.

*Depending on a quality of an adherend or a condition of its coated surface, these tapes may leave adhesive residue, cause discoloration or damage the adherend. Please check the quality and the condition and then use the tapes.

Fitlight tape 736 (Strong adhesive type)

Suitable for paving roads such as concrete and asphalt ones, and for heaping up face blocks. Extremely strong, hard to shrink on exposure to heat, and highly adhesive to a rough surface.

Features >>>

~For construction and exterior~

- Able to use outside of wall and road
- Good heat resistance and tear-resistance
- Good adhesion to rough surface and less adhesive



A 140-kg of load is applied on by a truck



A video of a heat resistance test



Sticks fast to a rough surface



Not comes off even under great pressure



Not tears while being removed

Specifications

Color	Width (mm)	Length (m)	No. of rolls per carton
Mango	50	25	30
	75		24
	100		18
	150		12

Physical properties

Item	Unit	736
Tape thickness	mm	0.12
Adhesive strength	N/10mm	3.3
Tack	Ball No.	15
Tensile load	N/25mm	0.5
Tensile strength	N/10mm	40
Elongation	%	30

*Data are only references; they are not guaranteed values.

Paint Masking Tape

Paper masking Tape 653

Masking tape designed for general building painting work.

Features >>>

The tape has minimal elasticity for easy application. 653 demonstrates a high resistance to solvents so there is little peeling and residue when painting.



Specifications

Color	Width (mm)	Length (m)	Individual packing(M)	No. of rolls per box	No. of rolls per carton	
White	12	18	10	100	1,000	
	15		8	80	800	
	18		7	70	700	
	20		6	60	600	
	24		5	50	500	
	30		4	40	400	
	36		3	30	300	
	40					
	50•60		2	20	200	
	80		1	10	100	

Paper masking Tape 655

Masking tape for sealing work.

Features >>>

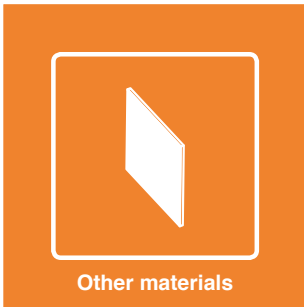
The tape has minimal elasticity for easy application. Creates clean lines and comes off smooth when removed.



Specifications

Color	Width (mm)	Length (m)	Individual packing(M)	No. of rolls per box	No. of rolls per carton
Blue	12	18	10	100	1,000
	15		8	80	800
	18		7	70	700
	20		6	60	600
	24		5	50	500
	30		4	40	400
	40		3	30	300
	50		2	20	200

*Data are only references; they are not guaranteed values.

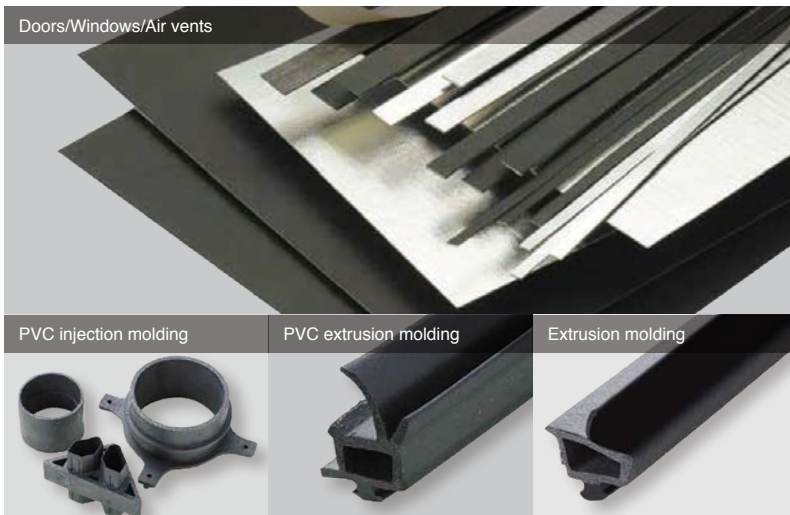


A new type of a fire-resistant material which expands and forms a thermal insulating layer when a fire breaks out.

Fire-resistant thermal expansion material

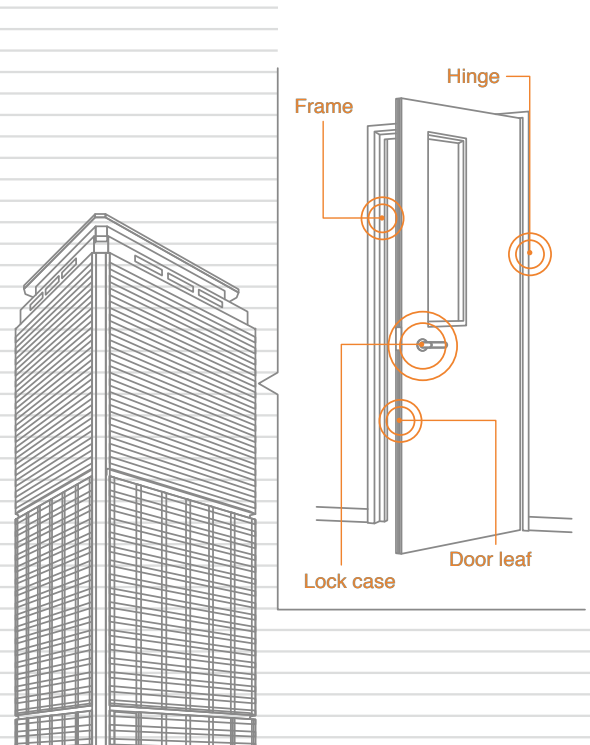
Fi-Block® (for door, window)

Fi-Block, a flexible, organic and thin fire-resistant material, is produced for using the Sekisui Chemical's plastic technology. Unlike conventional inorganic fire-resistant materials, it demonstrates fire-resistant and fire-proof properties only when it expands in reaction to fire.



Sekisui Chemical produces Fi-Block in a range of shapes using an extrusion or an injection molded process.

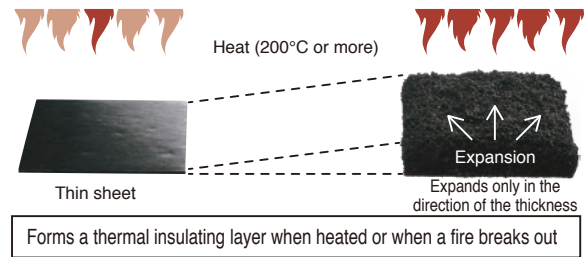
By used molded Fi-Block, you can enhance an appearance of structure. On the other hand, Fi-Block used in an attachment part made by an injection molded process, which is also suitable for a tentative fixing.



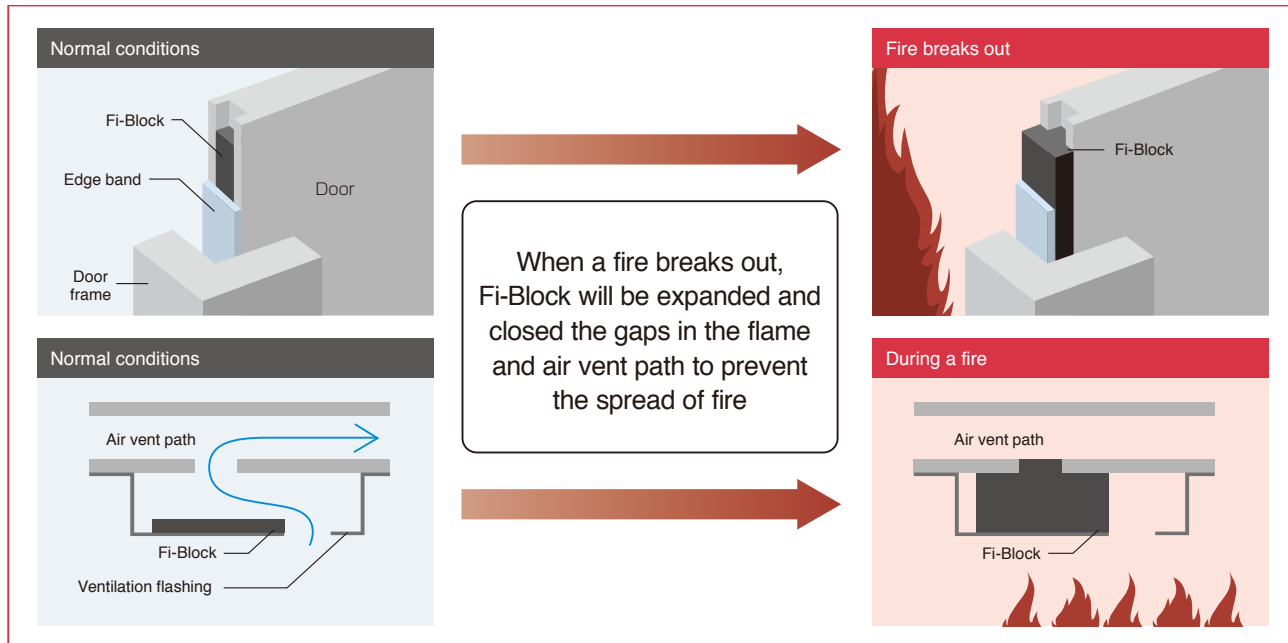
Features >>>

Fi-Block is a thin sheet and can be applied with adhesiveness, which makes it easy to bend and cut it. It is also an optimum material for small and narrow spaces, which makes fire-resistant design more flexible.

Sekisui Chemical offers a variety of Fi-Block to suit various applications.



Specifications >>>

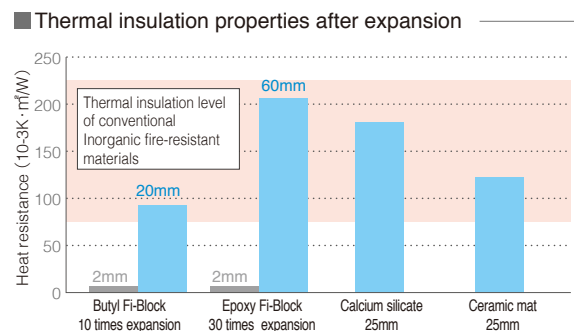
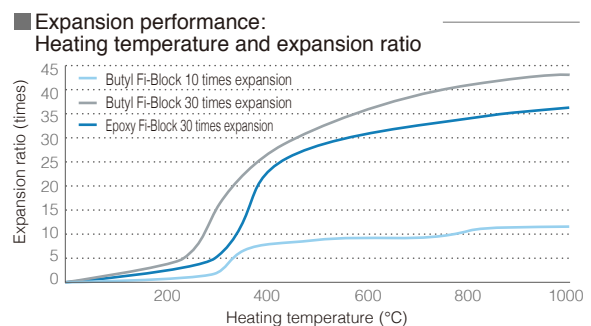


High expansion/Thermal insulation

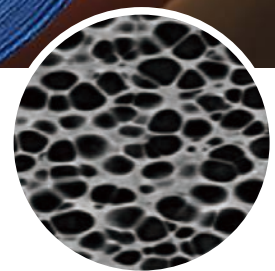
Fi-Block will not expand under room temperatures. When heated in more than 200°C, it will be expanded from 5 to 40 times of its original thickness (and the rate of expansion can be adjusted or designed to conform to requirements), forming a thermal insulating layer. It demonstrates superior thermal insulation properties, withstanding a fire.

Superior workability

With its thin and flexible shape, Fi-Block can be easily bent and cut. It can also be used in small and confined spaces, which have always proved problematic.



When a 2mm-thick Fi-Block expands, it provides high thermal insulation equivalent to that of a 25 mm inorganic fire-resistant material.




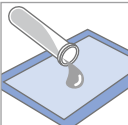
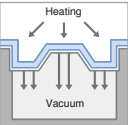
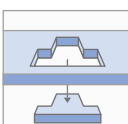
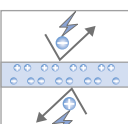

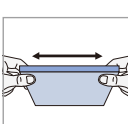

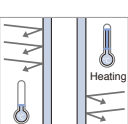



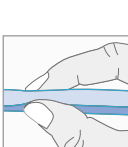
A closed-cell polyolefin material

Cross-linked polyolefin foam **Softlon®S**

This is a foamed product which achieves an ideal balance of flexibility, smoothness, heat insulation, and sealing.

Various kinds of Softlon S, whose expansion ratio is from 5 times to 40 times, can be selected according to customer needs.

Features >>>

<p>Eco-friendly</p> <p>Among resins for foam products, polyolefin is known to be environmentally friendly.</p> 	<p>Chemical resistance</p> <p>It is unsusceptible to chemicals such as acid, alkali and organic solvents. thanks to its resistance to them.</p> 	<p>Thermal plasticity</p> <p>It has the features of being stable form at normal room temperature and getting soft so as to be easily molded. when heated.</p> 
<p>Workability</p> <p>It responds to various processing methods such as slicing, vacuum forming, embossing, lamination and printing.</p> 	<p>Electrical properties</p> <p>It has high dielectric strength, insulation to high frequencies. and excellent in electrical properties.</p> 	<p>Water resistance</p> <p>Even if it is left soaked in water for a long time, it absorbs little water.</p> 
<p>Toughness</p> <p>It has high mechanical strength, including tensile, tear and compressive strength.</p> 	<p>Smoothness</p> <p>With its uniformly sized and fine cells, it feels very smooth.</p> 	<p>Insulation</p> <p>It achieves great insulation because it does not allow the air to convect in each cell,</p> 
<p>Buoyancy</p> <p>Fine cells are uniformly arranged in this product, which prevents water from penetrating and makes it float in water or other fluid..</p> 	<p>Light weight</p> <p>It achieves light weight while keeping high mechanical strength for a foam product.</p> 	<p>Sealing performance</p> <p>Softlon achieves excellent flexibility and high adhesion, absorbs little water and demonstrates excellent waterproof performance.</p> 
<p>Flexibility (Shock-absorbing properties)</p> <p>It has both elasticity, one of the characteristics of a cell structure, and flexibility, one of the characteristics of polyolefin.</p> 	<p>The standard type with all the Softlon's basic functions.</p>	

Specifications >>>

■ Comparison of flexibility (Shock-absorbing properties) of Softlon S and other materials

Item	Unit	Softlon S (Polyethylene foam)	Soft urethane foam (Ether type)	Soft PVC foam	Polystyrene foam
Cell structure		Closed	Open	Closed	Closed
Thickness	mm	3.00	9.84	4.82	5.20
Apparent density	kg/m ³	33	17	140	32
Tensile strength	MD	kPa	420	980	-
	TD		290		
Elongation	MD	%	204	111.5	-
	TD		165		
Compressive strength	25%	kPa	34	64	240
	50%		98	145	307
	75%		320		542
Compression set		6.5	1.5	3.0	21.5

*Compared with Sekisui's products.
Data are only references ; they are not guaranteed values.

Softlon S has intermediate nature between the nature of soft urethane foam and that of polystyrene foam. Its shape can be flexibly changed. In addition, it has good tensile strength and flexibility, and achieves high elasticity, which relieves the feeling of pushing the bottom.

■ Comparison of insulation of Softlon S and other materials

Item	Density (kg/m ³)	Thermal conductivity (W/m · K)
Softlon S	33	0.0345
Soft urethane foam	25	0.0372
Rigid urethane foam	25 ~ 35	0.0342 ~ 0.0582
Polystyrene foam	16 ~ 30	0.0302 ~ 0.0360
Glass wool	10	0.0395

*Compared with Sekisui's products.
Data are only references ; they are not guaranteed values.

Softlon is made of polyolefin, which achieves low thermal conductivity and high insulation. In addition, since it has a closed-cell structure, it absorbs little water and its insulation performance is hardly degraded by moisture. It is also used in a wide variety of fields as an energy-saving material with a function of keeping something warm and cool.

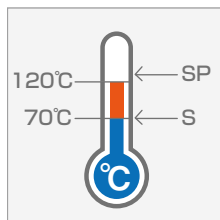
Option >>>

Properties of the higher-grade Softlon.

Heat insulation

Softlon is a combustible foam material with a basic function of being resistant to 70°C heat.

However, both Softlon NF and Softlon SP have higher heat insulation, which are suitable to make a wide range of molding products.



Softlon NF/SP

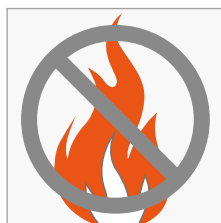
■ Rates of each Softlon series' dimensional changes before and after heated

Item	Thickness (mm)	Density (kg/m ³)	Dimensional changes (% · MD)			
			70°C	90°C	110°C	120°C
Softlon S	3.0	33	-1.0	-	-	-
Softlon NF	3.0	33	-0.5	-1.0	-2.4	-
Softlon SP	3.0	40	-	-	-0.6	-1.4

*Test Method : JIS K 6767
Data are only references ; they are not guaranteed values.

Flame retardancy

All the Softlon series are designed to burn at a slow pace and give off little black smoke and toxic gases. Softlon FR-ND and THERMOBREAK®-RT achieve higher fire retardancy so that they are suitable for use in producing special things such as railroad cars.



Softlon FR-ND

This meets flame retardant standards for the Japanese market

- UL standard UL94 HBF HF-1 (Home appliances / IT devices)
- A combustion test of materials for railroad cars



THERMOBREAK®-RT THERMOBREAK®

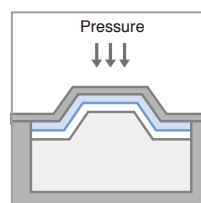
This meets flame retardant standards for the global market

- BS 476 parts 6 & 7 (British Standard)
- AS 1530.3 (Australian Building Code Standard)
- ASTM E84 (25/50) (United States)
- FM Approved (Thermobreak Tube)

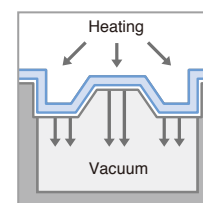


Thermoformability

Softlon is made of physically cross-linked polyolefin so that it is excellent in tensile strength, elongation and tear strength. Softlon SP and Softlon IF can be thermoformed so easily that they can be molded more flexibly, such as being deep drawn by vacuum forming.



Press molding



Vacuum forming



Insulation materials for corrugated metal roofs with superior insulation and workability, which are used to make many construction sites.

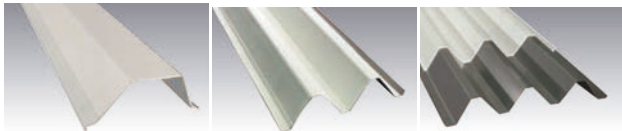
Insulation material for corrugated metal roofs **Softlon® SK**

This is so elastic that it can be flexibly attached to any roof shapes with either adhesive or heat. Using it makes it possible to build a pleasant working place with a well-insulated and elaborate roof. It also has other functions of preventing water condensation and the deterioration of metal roof materials.

Features >>>



Roof of a factory



Workability

Insulation

Prevention of condensation

Specifications >>>

■ Comparison of properties of insulating materials

Item	Density (kg/m ³)	Heat conductivity (W/m·K)	Water resistance	Weatherability
Softlon SK	25	0.0374	Excellent	Excellent
Expanded polystyrene foam	15	0.036	OK	OK
Soft polyurethane foam	25	0.037	Poor	Poor
Cemented excelsior board	700	0.151	OK	Poor
Gypsum board	860	0.114	Poor	Good
Colored steel plate	7800	44		

■ Specifications of Softlon SK (SK-4G)

Adhesive grade	Attachable with adhesive or heat
Width (mm)	540-690-870
Thickness (mm)	4
Length of a rolled Softlon(m)	200
Color	White, Gray, Beige

* If you want Softlon out of the specifications, please consult with us.

* Adhesive-type Softlon which meets cold-area specifications is available.



A new generation of open cell polyolefin material

Open cell physically crosslinked polyolefin foam **Softlon® OPC**

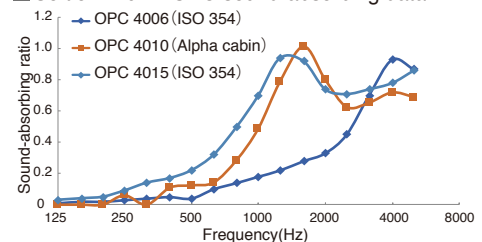
This newly-produced material has great flexibility and sound absorbency while maintaining excellent properties of conventional physically crosslinked polyolefin foam.



Features >>>

Softlon OPC is a physically crosslinked polyolefin foam with an open cell structure. Compared with our conventional Softlon, it is a more flexible, softer and greater sound-absorbing foam with low resilience while keeping the conventional crosslinked polyolefin foam's advantages of having excellent heat resistance, low water absorption and other great functions. It responds to cases where diverse functions are simultaneously needed, such as a combined use of thermal insulation performance and sound absorbency or those of thermal insulation performance and shock absorbency.

■ Softlon® 40XX OPC sound-absorbing data



Line up >>>

OPC-S type	Standard type	Black・White (Standard color)
OPC-FRND type	Flame-retardant type	Gray (Standard color)



Specifications >>>

Physical properties

Item	Test method	3000OPC	4000OPC	
Expansion rate (cc/gr)	Sekisui unique method	30 times	40 times	
Density (kg/m ³)	Sekisui unique method	33	25	
Tensile strength (kgf/cm ²)	JIS K 6767	MD/3.8 TD/2.1	MD/3.3 TD/1.7	
Elongation (%)	JIS K 6767	MD/190 TD/160	MD/130 TD/110	
Tear resistance (kg/cm)	JIS K 6767	MD/2.2 TD/1.5	MD/1.8 TD/1.0	
Compressive strength (kg/m ²)	Sekisui-unique method	25% compression	0.07	0.01
		50% compression	0.26	0.02
		70% compression	0.92	0.05
Permanent distortion rate by compression (%)	JIS K 6767	2.2	3.1	
Shape change by heat 70°C, 22h (%)	JIS K 6767	MD/ - 0.75 TD/ - 1.71	MD/ - 0.68 TD/ - 2.63	
Noise reduction rate	ISO 354	6mm thick	0.10	0.15
		15mm thick	-	0.45



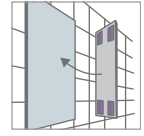
A thin and flexible product

Thin cross-linked polyolefin foam

Volara

This product achieves thinness and great flexibility, which was impossible for conventional foam materials. And it is so strong that it can stand pressure applied when stretched and prevent delamination when pulled in the direction of its thickness. Thanks to these features, it is used as a tape base material and a sealant in many fields.

Usage: For construction (as a tape for securing building material panels, sealant for building materials, a joint filler and others.)



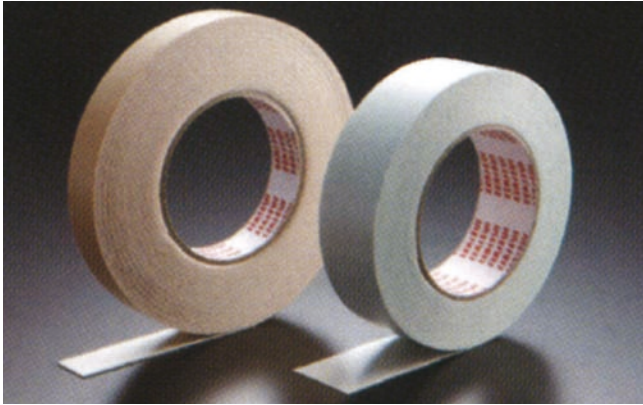
Use to secure a mirror

Features >>>

Flexible

Thin

Strong



Tape base for adhesive application

Specifications >>>

Item	IF(Black)	
Cell structure	Closed	
Apparent density (kg/m ³)	1.25	
Thickness (mm)	0.8	
Tensile strength (kPa)	Longitudinally	2.548
	Laterally	1.960
Elongation (%)	Longitudinally	400
	Laterally	450
Compressive strength (kPa)	25%	127
	50%	254
	75%	-
Compression set (%)	2.3	

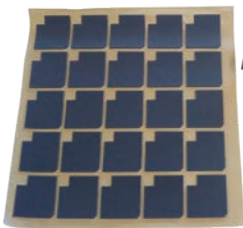


We always have various functional form products that meet the needs of many industries.

Cross-linked polyolefin foam

Fabricated Softlon® (Example in construction)

The highly expanded polyethylene foam "Softlon", which is produced using Sekisui's unique technology, demonstrates various functions including great insulation, thermal resistance, high strength and drug resistance. With these functions, it is used in a wide range of fields including the construction, engineering, automotive, packaging/physical distribution, sports, general merchandise, and medicine.



Proper size and shape

It can be produced as materials for use in coating with adhesive or tape, press working and grooving.



Easy-to-use in construction sites!

● Non-liner Softlon Tape
This tape does not have a separator so that it can save a lot of time and effort and keep the workplace clean.



Various shapes and sizes are available to meet customer needs.
We will deliver the customized/fabricated Softlon.



Nikkei Tokyo Head Office (Japan)



Tokyo Haneda Airport (Japan)



Laketown Outlet (Japan)



Shiodome Pedestrian Deck (Japan)



Other materials

The S-LEC™ Film is an interlayer one that offers a variety of properties when included in architectural laminated glass.

S-LEC™ Film

Architectural interlayer film

The S-LEC™ Film meets the contemporary architectural trend of using glass extensively. Furthermore, the interlayer film brand is receiving attention for proposing more open and safer uses of space as well as architectural designs with improved aesthetic properties.



Enter the comfort zone

Basic function of providing safety, security and cutting UV rays.

S-LEC™ Clear Film

Standard interlayer film

Features >>>

Laminated glass using S-LEC™ Film absorbs impact, prevents penetration, and stop shattering.

Shot bag test



1. Sheet glass(5mm)
Very dangerous because of the sharp glass fragments.



2. Tempered glass(5mm)
Shattered, and penetrated by the object.



3. Wire-reinforced glass(6.8mm)
The wires were cut, and penetrated by the object.



4. Laminated glass with S-LEC™ Film
Neither shattered nor penetrated.



The loudest sound range is made quietest.

S-LEC™ Sound Acoustic Film

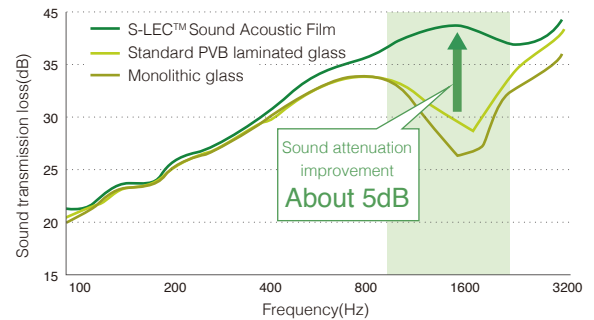
Sound insulation interlayer film

Enter the comfort zone

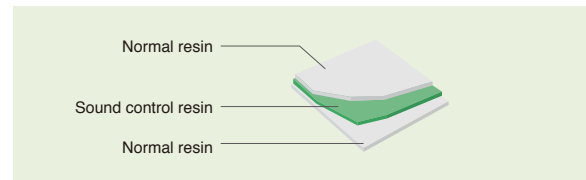
In humans, most audible sounds range from 1,000 to 4,000Hz. The Sound Acoustic Film improves the sound insulation effect by 5dB compared with standard interlayer films.

S-LEC™ Sound Acoustic Film sound insulation interlayer film is achieved by the three-layer extrusion technology that produces a film consisting of a sound insulation layer (core layer) and two layers of standard interlayer film (external layers) that sandwich the core layer. With this technology, the sound insulation performance of the film is improved while it also maintains the basic performance of standard interlayer films.

Sound Shielding performance comparison



The greater the sound transmission loss, the better the shielding



Example >>>



Iidabashi First Tower(Japan)



Kashiwazaki City Office (Japan) *Renovation project



London, Heathrow Airport (UK)



The British Museum (UK)



Filter out mid-infrared rays to eliminate the heat source

S-LEC™ Solar Control Film

Heat insulation interlayer film

Enter the comfort zone

While traditional interlayer film filters out more than 99% of ultraviolet rays, most of the infrared rays had penetrated across the film. S-LEC™ Solar Control Film substantially cuts ultraviolet rays as well as mid-infrared rays of 1,300 to 2,100 nm in wavelength—the primary cause of the heat from the sun that results in a burning sensation on the skin.



IR

Fine particles with infrared ray filtering function distributed in interlayer film

Solar control fine particles are distributed in standard layers using SEKISUI's own fine particle dispersion technology, which allows fine particles and materials with a variety of functions to be distributed evenly in an interlayer film resin. This has made possible a significant reduction of not only ultraviolet rays but also infrared rays which result in a burning sensation of the skin.

UV

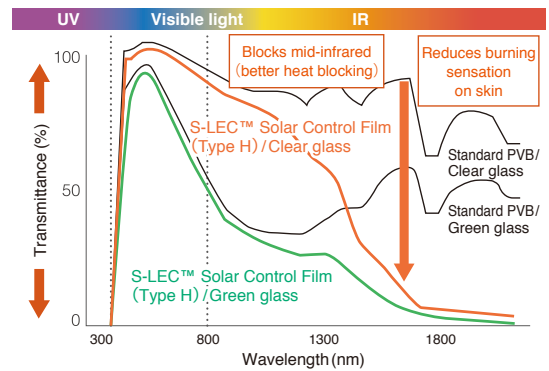
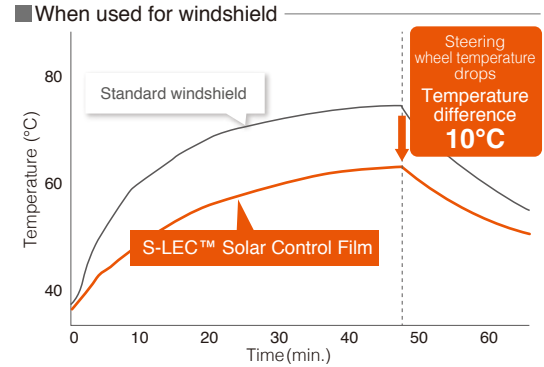
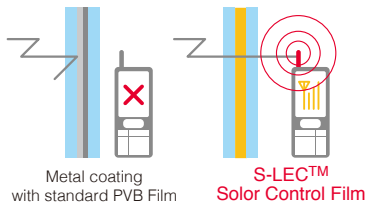
Substantially cut ultraviolet rays harmful to the skin and products

S-LEC™ Solar Control Film has further enhanced the UV filtering performance that is one of the basic properties of standard interlayer films. As evident in the graph, the film substantially cuts the harmful ultraviolet rays that enter a room. Solar Control Film protects customers' skin from suntans at bright cafés and prevents discoloration and changes in color of important products displayed in shop windows. It is also optimal for art and other museums and is effective for reducing the flying of insects into display items.

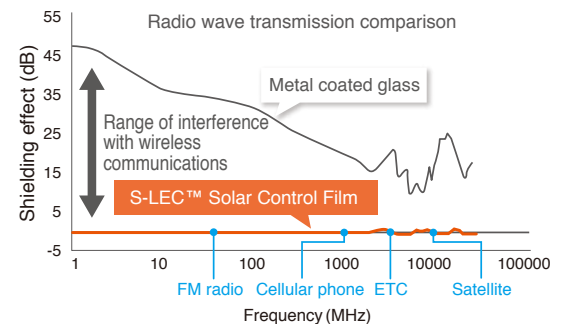
Electromagnetic permeability

Heat, no. Radio, yes.

Traditional heat-reflecting glass with a metallic coating reflects radio waves, as well as heat, and could impede mobile phones. S-LEC™ Solar Control Film does not block radio waves across most frequency bands.



Comparison of UV Transmittance	Wavelength (nm)	Transmittance (%)		
		Monolithic clear glass (2.5mm)	Standard laminated glass	Laminated glass with S-LEC™ Solar Control Film
	400	90.0	33.9	8.1
	390	89.0	4.2	0.3
	380	87.7	0.2	0.1
	Tv/%	90.5	88.7	83.4



Example >>>



Hotel New Otani Tokyo(Japan)



Naha Golf Club(Japan)



Seven Eleven, Tokyo(Japan)

This self-luminous interlayer film for laminated glass creates an attractive space !

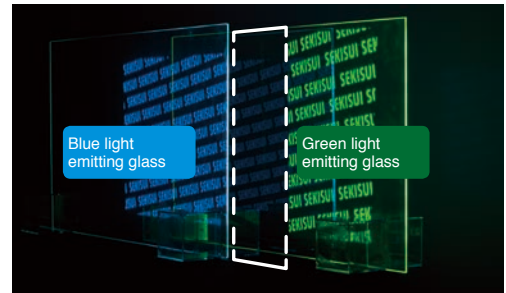
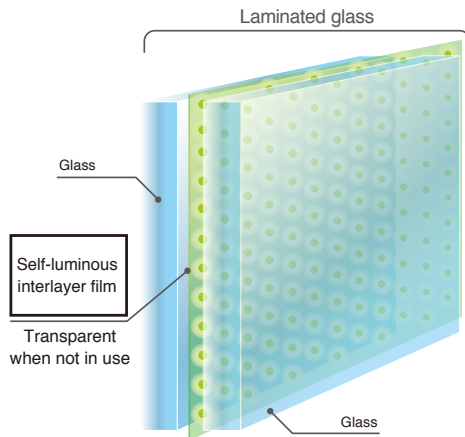
TALKING LIGHT™ (In Development)

Self-luminous interlayer film

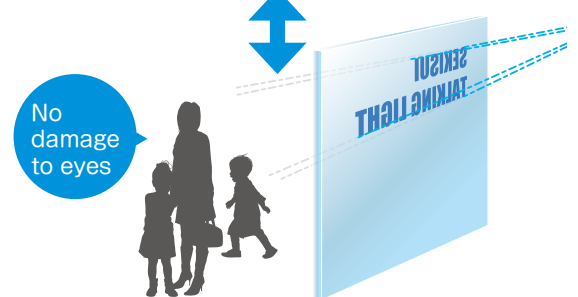
Various space designs can be realized by making transparent glass emit light !

- The transparent glass (*1) laminated with the film remains transparent.
- Two luminous colors - Green and Blue- are available. Red color is scheduled to be released.
- TALKING LIGHT with heat insulation is also available.

*1 Note that the visible light transmission of the glass is over 70%, which is applied to window shields.



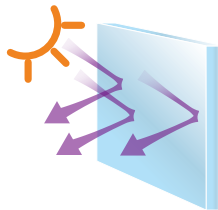
This film blocks the passage of light of a specific wavelength sent from a special projector to the glass.



Features >>>

UV-blocking effect

Blocks 99% of UV rays, which shows the same effect of some UV protection cream or arm cover.



Safety/ Crime prevention measures

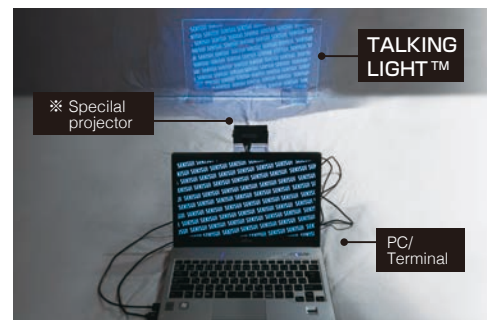
If the glass laminated with the film should be broken, it will not easily go into pieces.



The contents on a PC can be clearly projected on the the glass with a special projector.

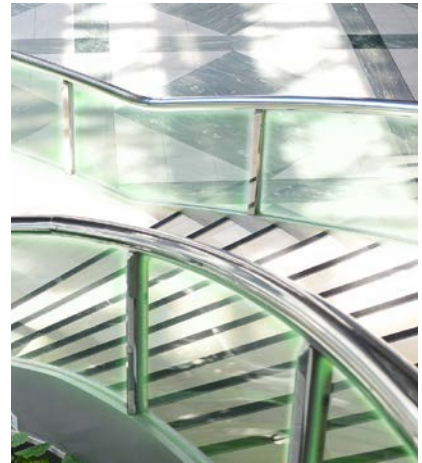
- The image projected on one side of the glass laminated with the film is not displayed on the other side.
- TALKING LIGHT itself emits light, which makes it possible to create a clear and vivid display.

※ A new model of a dedicated projector is scheduled to change its size.



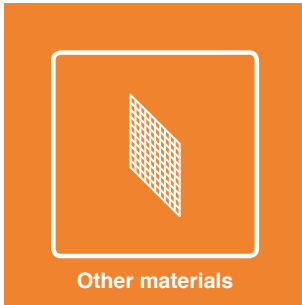
Use it with a LED light to decorate a space

Image >>>



Let's start to conserve energy from today

Saving electricity in summer and all through the year



"masa technology" the nano metal coating on fabric
The world's only technology of Sekisui Nano Coat Technology Co., Ltd.

Multi-functional heat-shielding net series

"masa technology" is a technology of applying a sophisticated metallic coating to surfaces of woven and non-woven fabrics and knitted goods at the nano level. Sekisui Nano Coat Technology Co., Ltd. was the first in the world to develop the nano-level metallic coating to fabric in 1975, and is now working hard towards producing higher-quality fabric with the nano metal coating technology.

Proprietary technology

Nano metallic coating



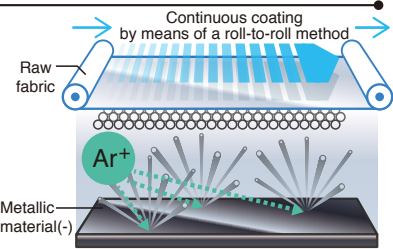
In 2016 masa technology "AICHI Environmental Award 2016"
In 2017 ECO AIRIUS "Cho Monozukuri Grand Award for Parts" [Lifestyle related product award]



Nano-metallic particles
NANO

The nano metal coating on fabric by sputtering

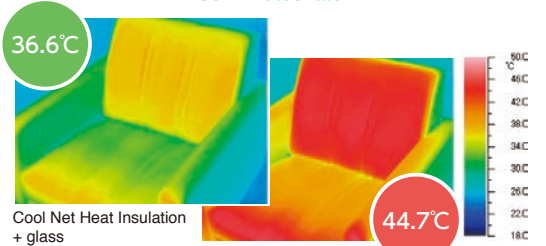
Sputtering is a technique used to deposit very thin metallic films directly onto a surface of fabric by bombarding metal molecules in a vacuum device. With this technique, ground fabric can have a metallic appearance and various functions without damaging its properties, texture and air-permeability. Furthermore, it is also an eco-friendly technique because no agents and binders are used.



Heat shielding effect

By taking measures against sunlight coming through the windows, you can reduce indoor temperature.

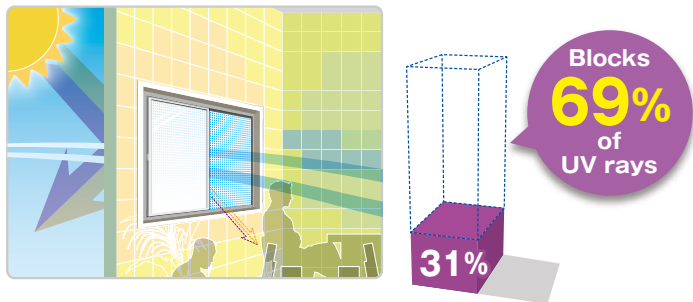
— 35 minutes later —



Tested by the Japan Testing Center for Construction Materials

UV cut 69%

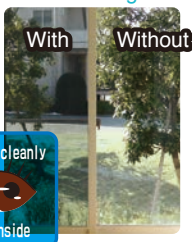
"masa net" also blocks UV rays, protecting your furniture and home décor from sun damage and aging.



Mirror effect

The coated metal particles of "masa net" reflect sunlight, which makes it difficult to see inside during the daytime without making the room dark, protecting your privacy.

Inside looking out

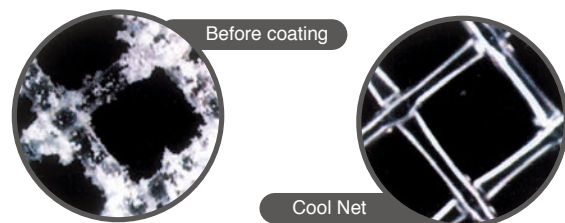


Outside looking in



Easy to maintain (does not attract dust)

The nano-coated stainless steel release static electricity generated in polyester materials, preventing dust from adhering to the net.



Micrograph at 100x

"masa net" made with our nano technology.
Just attaching the net to a window creates comfortable space.

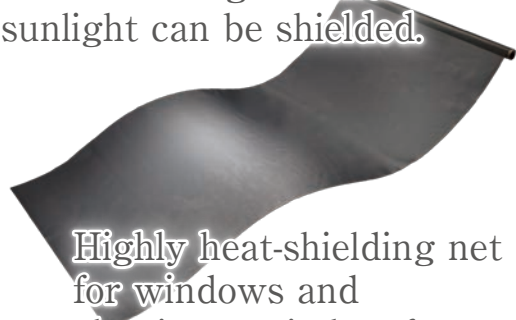
A series of heat-shielding nets
attachable to windows

Easy installation with a hook and loop fastener

masa **Cool Net** COOL NET **Heat Insulation**

Cut the net to the proper size and
put it on the window frame

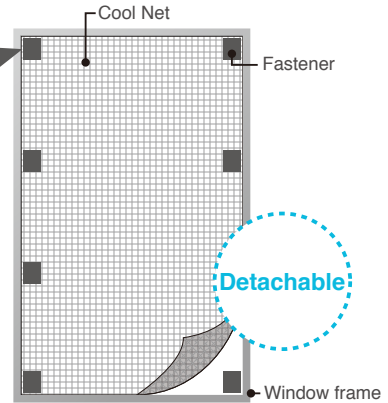
The scorching summer
sunlight can be shielded.



Highly heat-shielding net
for windows and
aluminum window frames



Put some hook and loop fasteners on
the window frame, and then stick the
net with its stainless-steel coated side
facing the sun to them so as for the net
not to slacken.



Just putting the net frame on a window can generate heat-shielding and mirror effects.

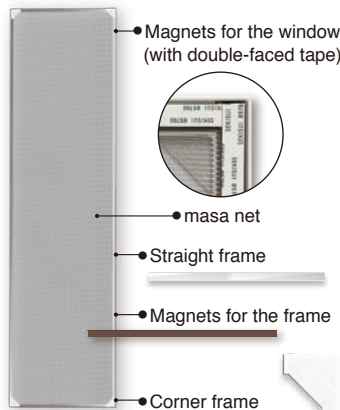
masa **Magnetic window screen**
ECO AIRIUS



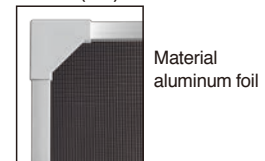
This made-to-measure net frame matches a
variety of sizes in windows !
"masa net" produced by the nano technology +
A window frame + Magnets



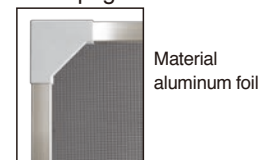
Can be attached to
a wide range of Windows
with its frame and magnets.



Silver (SL)



Champagne Gold



A new-type window screen serving as a blindfold with an heat insulating effect

masa **ECO AIRIUS**
screen window

This comes in various sizes:
standard size and whatever size customers want.

An unconventional
window screen
has come out.



Sunlight is reflected on the
nano metal-coated side of
the window screen.

Frame colors Nine colors are available.

Silver (S)	Dark Bronze (BKC)	Bronze (B)
Dark Gray (ST)	White (W)	B1
Ivory (AW)	Autumn Brown (AB)	Black (K)



The finest quality curtain featuring a combination of beautiful designs and functional beauty (Nano metal coating)

TESORO

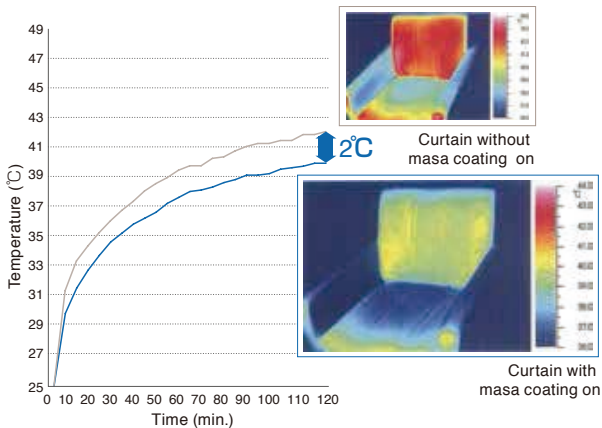
A heat shielding curtain

"TESORO" is an interior fabric which combines traditional, sophisticated designs and innovative functional beauty. By using our own "masa coating" technology, it's greater functionality and more subdued shades of color than ever before has been realized while a good texture of fabric remains as it is. "TESORO"- the very curtain which enjoy a harmony of traditional, beautiful designs and the cutting-edge technology.

With the curtain, an air conditioner can work more efficiently, which contributes to saving electricity and realizes ecological lifestyle.

Comparison chart of temperature changes

The stainless steel using in "TESORO" absorbs infrared energy, which shields heat from the outside of the room. The results of the 120-minute heat-shielding test showed that the test TESORO could reduce the room temperature by about 2°C.



[Test method]

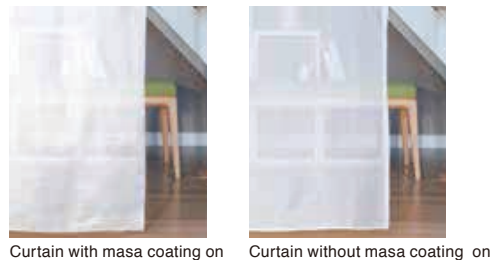
Infrared light was applied on two thick curtains, one with the masa coating on and the other without it on. The results shown in the above graph were the temperatures on the surfaces of the chairs.

Note: The test curtain was TC-01 masa PAOLA of TESORO.

Mirror effect

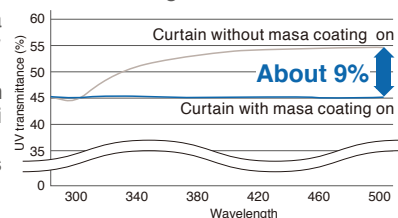
(Comparisons of invisibility from the outside of the room)

The fabric with the masa coating on has a mirror effect, preventing someone from peeping from the exterior.



Comparison chart of the UV blocking rate

TESORO (TC-010 masa PAOLA) maintains low UV transmittance, preventing discoloration of furniture and tatami mats (or straw ones). (according to Sekisui's investigation)



The test curtain was TC-01 masa PAOLA of TESORO

Features >>>

UV blocking / Infrared ray shielding / Insulation effect

Save money on electricity

Heat insulating effect / Heat retention

Enhance Air-conditioning efficiency

Low power consumption

Save energy / Reduce CO₂ emissions

About 3,680 yen
a year can be saved
by making the room
temperature reduced
by 2°C.

CO₂ reduction
about 62.2kg
a year

*The above figures were calculated using TESORO TC-010 masa PAOLA based on one of the data issued by The Energy Conservation Center, Japan.

Collection >>>





Tradition meets technology



Migusa is a new type of tatami developed by Sekisui that delivers modern-day functional performance while retaining the authentic texture and feel of all-natural mat rush.

Highly functional tatami **MIGUSA**

Migusa is a unique product made from traditional mat rush together with a specially developed plastic containing inorganic material. The mat rush delivers the authentic texture and feel of tatami matting while the plastic component enhances durability, improves product safety and allows greater flexibility of design and color schemes.

Features >>>

Will not fade or discolor

Conventional mat rush tatami



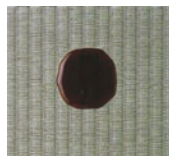
Migusa tatami



*Test pieces were exposed to direct sunlight for two full years in an outdoor setting.

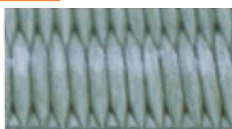
Resists staining from water and other liquids

Migusa boasts virtually 100% stain resistance and is easy to keep clean compared to conventional mat rush tatami.



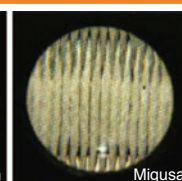
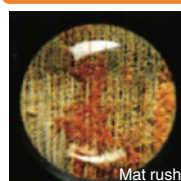
Simply wipe with a damp cloth.

Resists splitting and fluffing



*Test pieces were subjected to strictly controlled friction tests. Friction was applied in the fiberweave direction.

Health benefits from improved resistance to mold and mites



Mold began to appear on the mat rush test piece after ten days and had covered the entire surface within 28 days. Meanwhile, Migusa showed no evidence of mold even after three months.

Environmental safety

Migusa does not contain or emit any sick building syndrome substances. It is totally free of formaldehyde, considered a major indoor pollutant.

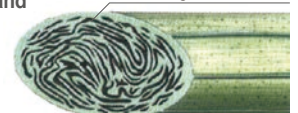


Migusa cushions the feet while providing a sturdy non-slip surface-ideal for children and elderly people

Migusa has the same sponge-like structure as conventional rush mat, offering support underfoot as well as cushioning in the event of a fall.

Cross-section of strand

Air pockets provide cushioning



Line up >>>

A range of colors, styles and patterns to suit every type of interior aesthetic



Tatami mat

MIGUSA



50 colors

Adding functionality and creativity to a traditional Japanese space
functional tatami mats available in a wide range of colors

Installation required

Tatami mats from the Migusa range include a secure installation base. All mats are made in-store to the nominated dimensions. Available in a range of color combinations with optional border.



Laying type

System tatami

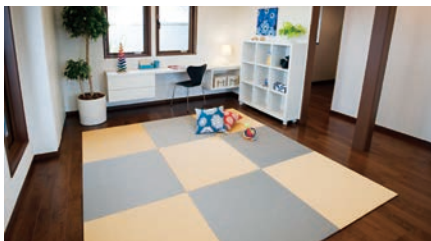


56 colors

This is for a new house or a home renovations

Installation required

A comfortable tatami space can be created on wooden floors in your space by the Sekisui's unique method of laying the square tatami mats, each of which has a thickness of 750mm, equivalent of that of flooring, and their dedicated parting materials.



Instant

Floor mats



56 colors

Floor mats give instant access to the benefits of tatami

No installation required

Now with extra added cushioning and easier to use. Available in a wide range of colors to suit every style and application.



Instant

Allerbuster™ floor mats



防災

4 colors

Provides enhanced anti-allergen performance for children with allergic sensitivity

No installation required

Floor mats with Allerbuster protection. Allerbuster floor mats provide a safe and hygienic play space for children with allergic sensitivity.



Allerbuster P.63



For floor heating

Koharu [A standardized tatami without borders]



56 colors

A tatami mat for a living room floor equipped with floor heating

Installation required

This tatami mat is produced using tatami facing for floor heating and a thin straw base with a high heat-transfer coefficient. It is as thin as 11mm, equivalent of the thickness of flooring. A tatami space is created just only by laying down some of the mats on flooring.



For floor heating

Koharu [with boarders]



3 colors

A tatami mat for floor heating, which has high durability and heating efficiency.

Installation required

Durability -one of the properties of "MIGUSA"- is added to it. We have a tatami maker cut the tatami into the required sizes.



Portable

Tatami roll



5 colors

Roll out to create a Japanese space anywhere, anytime

No installation required

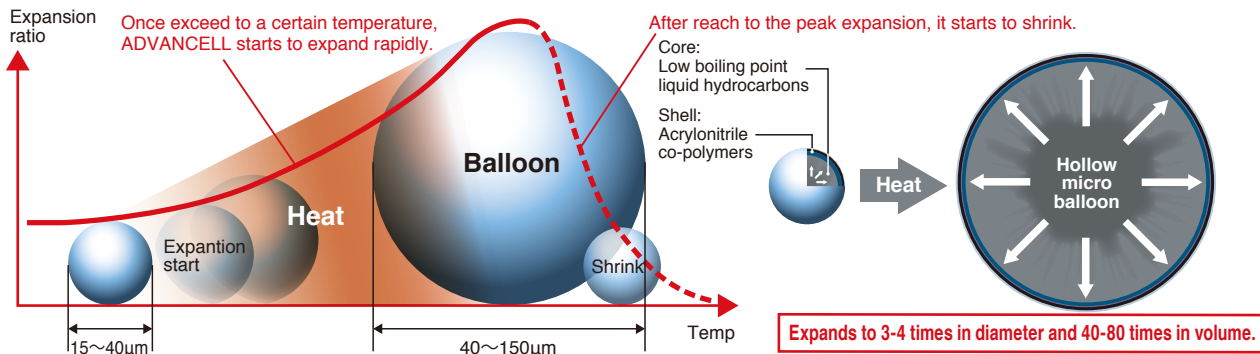
Portable roll-out tatami sheets are perfect for creating an instant Japanese space in a hall, gymnasium or other meeting space. After use the sheets roll up into a compact and lightweight package that is easy to carry.



Thermo-expandable microspheres which generates uniform cells. Adding it with materials such as resin, elastomer and ink makes it possible to achieve various properties (weight reduction, insulation from heat, etc.)

Thermo-expandable microspheres **ADVANCELL[®] EM**

ADVANCELL EM is thermo-expandable microsphere with thermoplastic cell containing low boiling point liquid hydrocarbon. When heated, ADVANCELL EM microspheres expands greatly in size; the heat boils hydrocarbon while softens the thermoplastic shell and expands the shell. Because it is hollow balloon, it creates closed cell structure. By selecting the appropriate grade, you can optimize the expansion starting temperature or degree of expansion.



Features >>>

ADVANCELL EM brings higher quality products (vs. Chemical foaming agent)

Compared with chemical foaming agents (ADCA), ADVANCELL EM has the following advantages because of shells.

- Makes the surface of a molded product flat thanks to its uniform and tiny cells.
- Generates cells even when used in a low-viscosity composite.
- With Sekisui's unique technology, a particle size distribution curve is sharp, which means that ADVANCELL EM can produce cells of almost the same size.

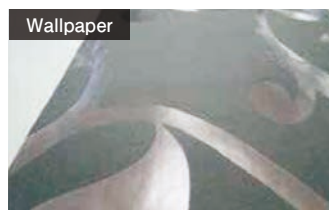
	Chemical foaming agent	ADVANCELL EM
Surface	 Silver streaks appear.	 Flat surface
Cross-section	 Ununiform, large and open cells	 Uniform, small and closed cells

Compared with other conventional products of the same type as ADVANCELL EM, it can generate uniform cells, a sharper curve being shown in its size distribution data.

Unlike some other thermo-expandable foam agents, ADVANCELL EM is produced using the Sekisui's own patented technology of dispersing particles, which can create cells of almost the same size. It expands to make cells of almost the same size so that it can bring about beautiful finishing. Using this product, in addition, enables the user to easily control processing temperatures partly because it starts to expand at a certain temperature and partly because the amount of heat necessary to create uniform cells is fixed.

Purpose >>>

- Housing materials (wallpaper, flooring material, synthetic wood, paint, putty, sealing material, lightweight clay, etc.)
- Automobile parts (exterior parts and interior parts such as a door panel, coating, adhesive)
- Daily goods (shoe soles, synthetic leather, foaming ink, cork, etc.)





Other materials

Environmentally friendly water soluble film with superior chemical resistance

Water-soluble film **ADVASOL**

ADVASOL is a water-soluble film with high chemical resistance, which is produced by Sekisui's compounding technology using Sekisui's original polyvinyl alcohol resin. Not only can it make chemicals which requires special handling easy to use, but also it can reduce the amount of packaging materials to be wasted. And what is more, it is expected to be widely used as materials for packaging disinfectants, agricultural chemicals and pharmaceuticals in the new packaging market.



Features >>>

- Environmentally friendly and leaves no eco-toxic residues .
- Can be used to package concentrated liquids and chemical powders without compromising user safety.
- Delivers superior chemical resistance to acids, basic compound and borates etc. and lasts longer than standard PVOH film.

Purpose >>>



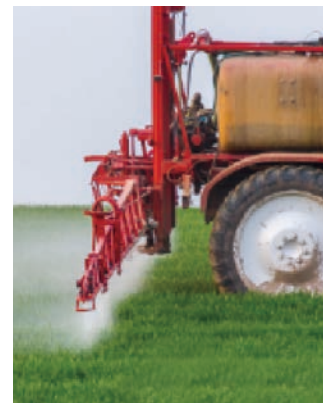
Packaging a range of chemicals used in pools and spas, including chlorine and bromine etc.



Packaging house hold detergents, bleaches, etc.



Packaging industrial chemicals, such as disinfectants, antiseptics microorganism - controlling agent.



Packaging agricultural chemicals, including herbicide sand pesticides etc.

Specifications >>>

Item	Chemical resistance	Water solubility (normal temperature)	Water solubility (low temperature)	Application(examples)
Highly chemical-resistant type : XHC	Excellent	Good	OK	Chlorine disinfectants etc.
Rapidly soluble type : STR, SDH	Good	Excellent	Excellent	Agrochemical, cleaners
General purpose type : SMD, SMT	OK	Good	Good	Detergents etc.

Cushioning materials

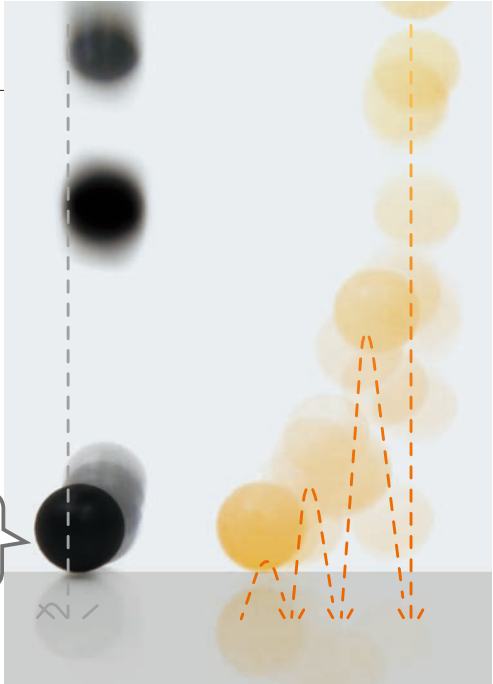


G-Polstar

A thermosetting resin dedicated to reduce vibration and soften a shock by converting vibration energy generated by shock into thermal energy.



The impact of a drop is converted into thermal energy.



Features >>>

- Great thermal resistance
- Excellent in compression set
- Various degrees of hardness and high to low damping properties
- No environmentally hazardous substances (RoHS compliant)
- No substances which can cause a loose connection, such as low molecular siloxane and sulfur
- A flame-retardant product satisfying UL-94 standard



EXAGEL

Thermoplastic elastomer dedicated to reduce vibration and lessen a shock .



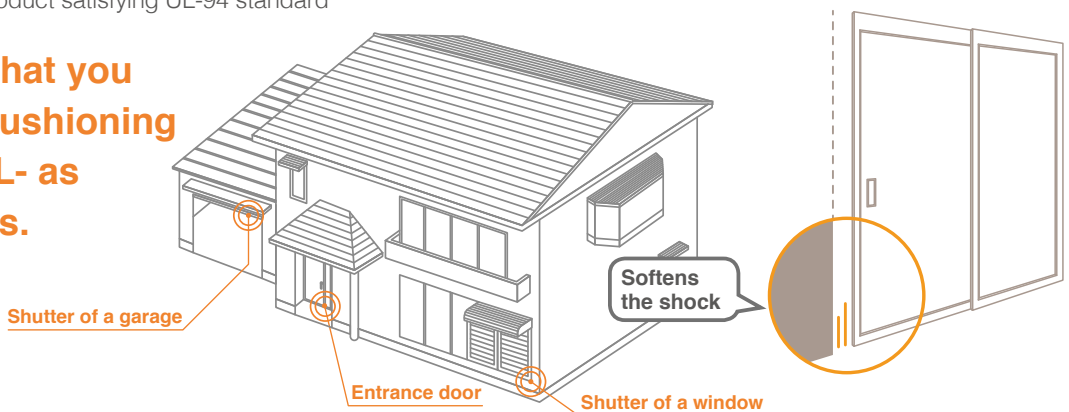
It is widely used for things which need great shock resistance, such as optical disk devices, audiovisual equipment and onboard equipment.



Features >>>

- Highly flexible material
- No substances which can cause a loose connection, such as low molecular siloxane and sulfur
- No environmentally hazardous substances (RoHS compliant)
- No halogen compounds including chlorine and bromine, red phosphorus and antimony
- A flame-retardant product satisfying UL-94 standard

We recommend that you use the newest cushioning product -EXAGEL- as building materials.



Damping materials



Pantel GEL

A damping material made of low-hardness and highly strong silicone gel, which can fill a gap. It is excellent in waterproof and resistance to dust and shock. It also produces inserted-molded products using general-purpose resins, metals and films.



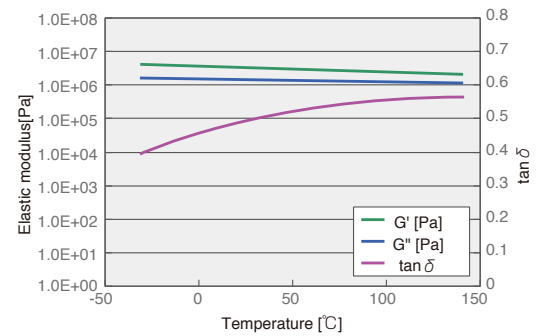
Insert-molded plastic product Insert-molded metal product Insert-molded dispenser Dispense type

Features >>>

- The strength of adhesion between Pantel GEL and a resin or a metal is greater than that of their adhesive failure
- It can realize composite molding, which makes it possible to reduce assembly processes
- Using the gel product can soften impacts and absorb a dimensional tolerance
- It is little influenced by temperature changes ranging from -20°C to 120°C



Property >>>



Hybrid Damper

A viscous fluid-filled damper is generally called as a oil damper, which has high damping property. ※ It serves as a dashboard.

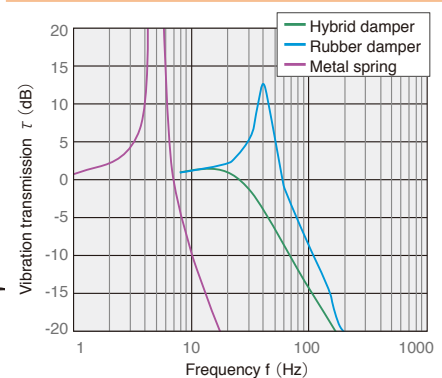


Features >>>

- High damping property thanks to its sealed viscous fluid: The damper has high damping property and wide damping frequency, which rubber dampers with no fluid sealed cannot realize
- Its performance is maintained even though it is affected by vibration or temperature changes, and it is strong resistance to breakage: There are many cars equipped with the damper as an interior part, to which needs to bear the heavy load applied
- Highly customizable because its rigid lid can be freely designed: Various shapes of a rigid lid can be designed for customers' needs



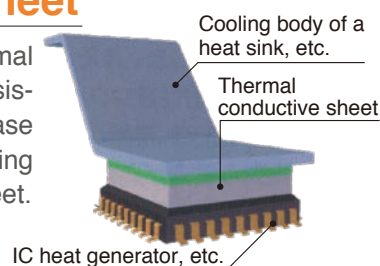
Property >>>



Silicone Thermal Conductive Sheet

Silicone thermal conductive sheets feature high thermal conductivity with no loss of the outstanding heat resistance and electrical insulation properties of the base material, silicone, realized by contouring to heating elements utilizing the exibility and adhesion of the sheet.

※ The low-molecular siloxane content that causes problems such as contact faults in electronic devices is no more than 70ppm, making it possible to use the product near contact points in devices such as switches.



The anti-allergen action of Allerbuster is recognized by the Japan Atopic Dermatitis Patients Association. Product recommended by the Japan Atopic Dermatitis Patients Association (Approval No.: S510400A)



Why don't you have your products treated with Allerbuster?
We are pleased to help you develop products free from allergen.



Materials for health care products

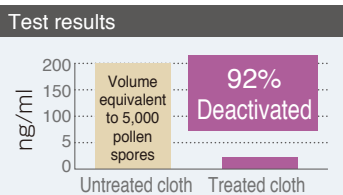
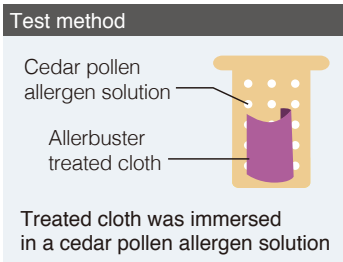
Allerbuster has been proven to reduce pollen allergens by more than 90%. Allergens can be inactivated when adhering to the product treated with Allerbuster!

Anti-allergen agent **Allerbuster™**

Allerbuster is a polymer-based anti-allergen agent. Allerbuster chemically bound to the surface of processed products envelops allergens, such as pollen, dust mite droppings and their dead bodies, effectively controlling allergen action levels.

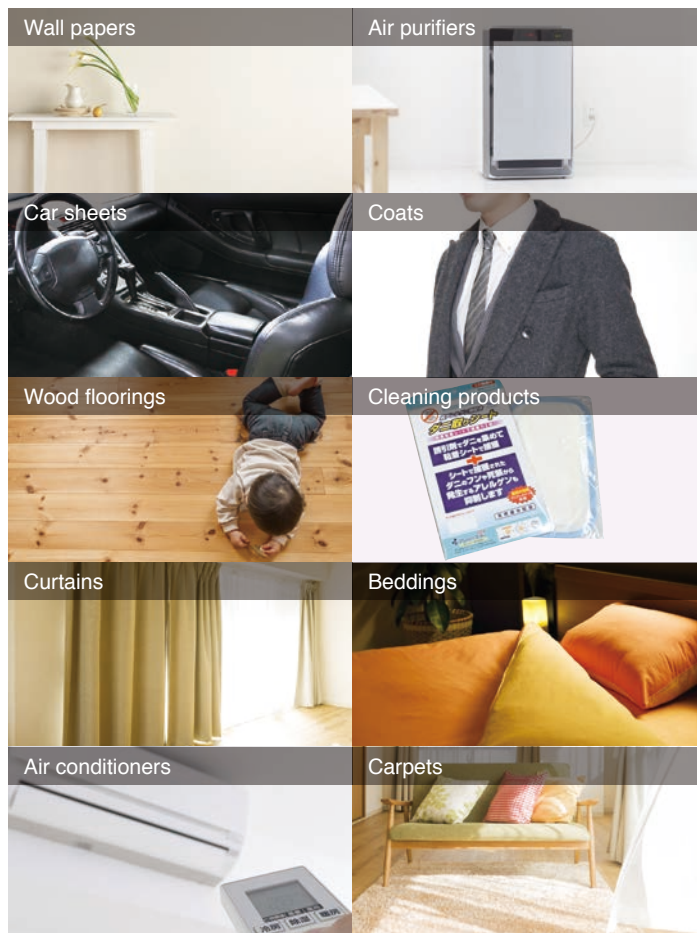


Allerbuster has been proved to deactivate airborne pollen allergens in living environments by the ELISA test method.



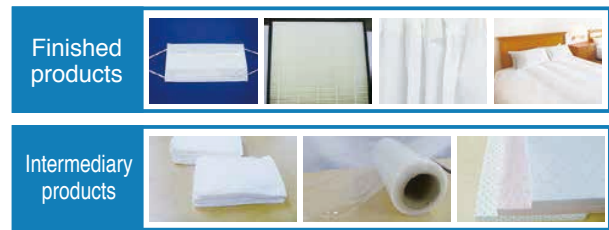
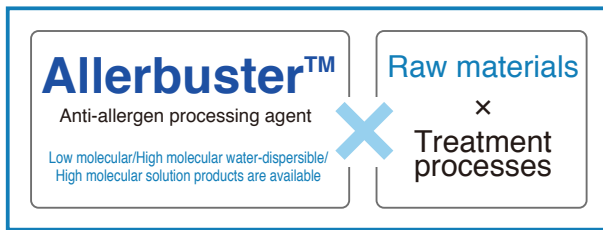
The deactivation effect of Allerbuster on airborne pollen allergens in living environments (the amount of pollen allergens and the deactivation effect of Allerbuster)

The effect of Allerbuster was demonstrated when the allergens came into contact with it.



Features >>>

Sekisui provides a range of finished and intermediate products through various combinations of raw materials and treatment processes.



Extremely safe

Allerbuster is made using an extremely safe polymer that is harmless even when ingested or coming into direct contact with the skin. The safety of the polymer has been confirmed through animal testing. It is also non-volatile so that it gives off no nasty odor.

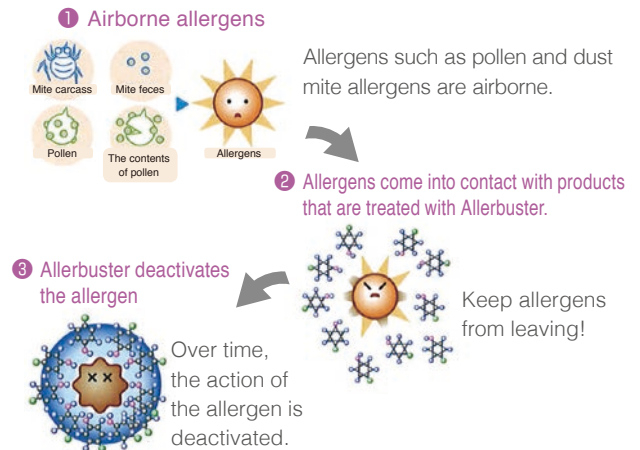
Duration of effect

Allerbuster demonstrates a high resistance to washing and ensures that the anti-allergen action lasts for a long time because it is chemically bound to the fabric.

No discoloration

It is possible to impart the anti-allergen function to existing product designs, without damaging their appearance.

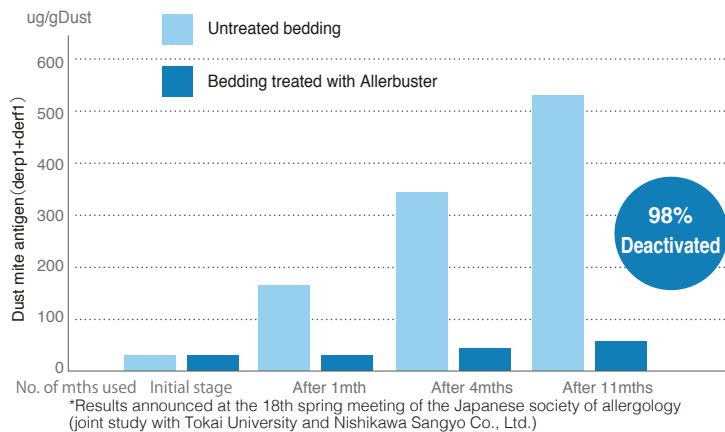
Allerbuster mechanism



Specifications >>>

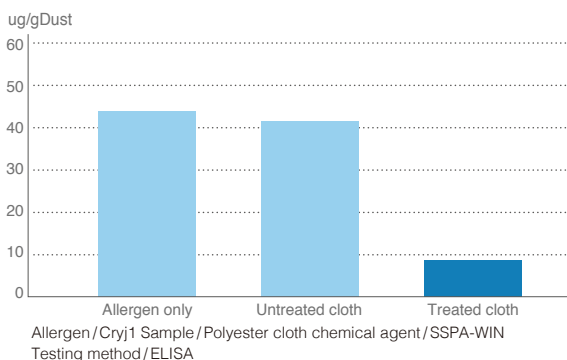
Allerbuster anti-allergens performance

Monitoring test for Allerbuster-treated products

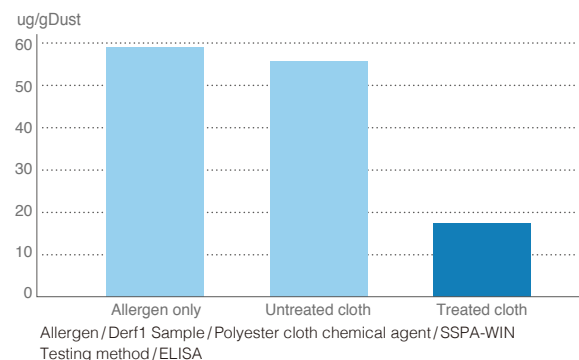


Monitoring test

Polyester cloth (cedar pollen allergen)



Polyester cloth (dust mite allergen)





Antiviral Finished Product

(Reduces the number of specific viruses on textiles)

Certified No.UK15A16
Sekisui Material Solutions Co.,Ltd.

⚠ Caution

- This antiviral finished product is not intended for the treatment or prevention of sicknesses.
- Antiviral test is conducted with a virus strain ATCC VR-1679 (with envelope) that has been left for two hours at 25°C.
- This antiviral finished products does not inhibit the function of virus.

We would like to help you develop new products using this product.



This product absorbs viruses and prevents spread of them !

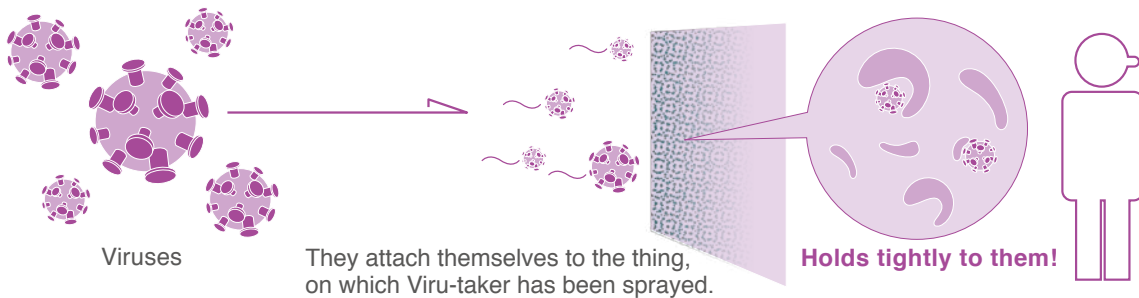
Antivirus processing agent **Virus-taker**

"The daily necessities and interior materials for housing, to which this product is sprayed, can quickly absorb viruses and prevent them from spreading.

Mechanism >>>

Catches viruses quickly and holds on tightly to them !

A polymer with ionic groups similar to neuraminic acid catches viruses, which prevents host cells from binding to the surface of their acceptors.



The mechanism of virus multiplication

A virus enters into cells and multiplies their nuclei.
Sneeze/Cough
The virus has been infected with the throat or the bronchi, and it multiplies.



Virus*

- Particle size: 80-120 nm
- A virus does not grow by itself, but it starts to multiply only when it invades human or animal cells.
- Droplet infection by sneezing or coughing and contact infection
- Once one virus particle enters the human body, it increases into one million viruses a day. And a symptom appears only when the number reaches ten million viruses,
- Two million viruses are released by one sneezing and one hundred thousand ones by one coughing.

*Virus strain ATCC VR-1679 (with envelope)
Note: This product does not work on all viruses.

Specifications >>>

A high level of safety

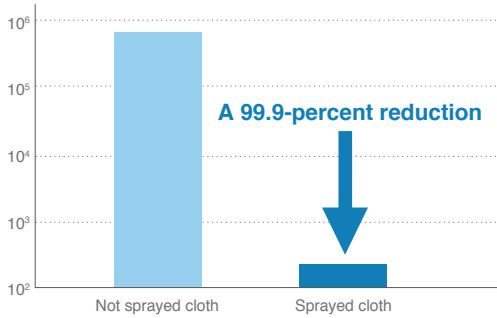
Acute oral toxicity/ Skin irritation / Mutagenicity test

*1- Examining body: Japan food research laboratories

*2- Examining body: Chemicals evaluation and research institute, japan

Antivirus performance

■ Antivirus performance test using the sprayed cloth



Test site

Note: ● This antiviral finished products does not inhibit the function of virus.
 ● Virus strain ATCC VR-1679 (with envelope)
 ● This product does not work on all viruses.

Example >>>

It can be widely used in places where many people gather, such as hospitals, schools and amusement parks.

Why don't you make your products antivirus ?





A new type of virus removal product born out of "Virus-taker™"
This is an aerosol spray which provides the double effects of disinfection and virus removal.

NOWCARE

Virus removing and disinfectant spray

"NOWCARE" is a brand name of one of the self-care products made by the Sekisui Material Solutions Co., Ltd. Just spraying it can make everywhere, including a workplace and a house clean. *Enveloped viruses

Just by spraying it on what you are going to touch, bacteria and viruses can be blocked!



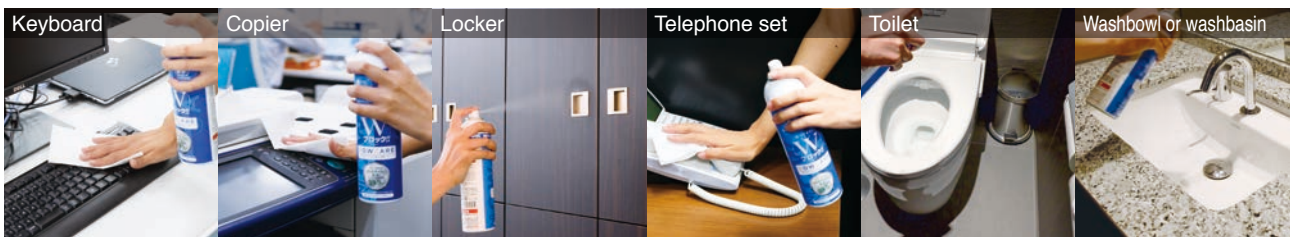
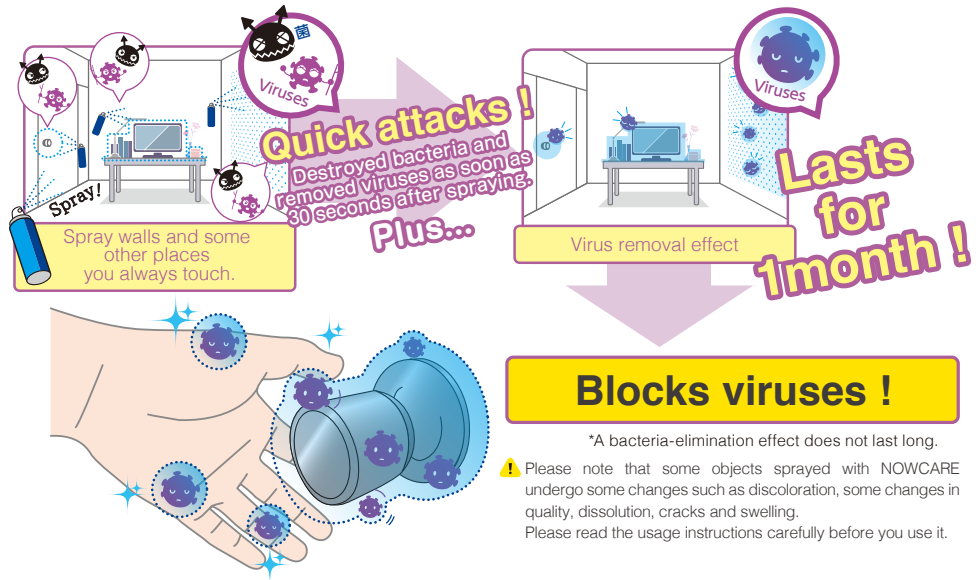
*All bacteria and viruses can not be killed.



Mechanism >>>

The product made from a blend of some ingredients of "Virus-taker" developed with Sekisui's unique technology

Polymer with ionic groups similar to neuraminic acid catches viruses to prevent them from bonding to the host cell surface.

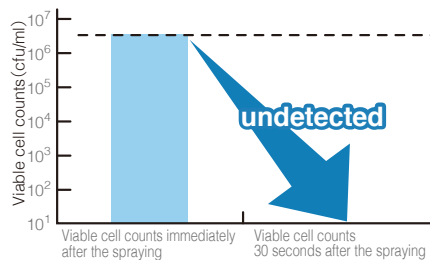


Specifications >>>

Antibacterial effect test

Bacteria α
● Spray solution

Test results shown 30 minutes after spraying



*Test method

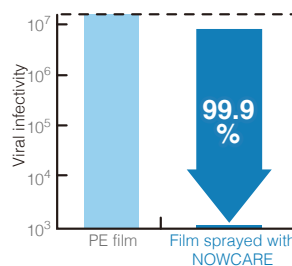
- Preparation of a test specimen: NOWCARE was sprayed into a disinfected container, and then 10ml of the liquid was pipetted into a test tube, which was used as the test specimen.
- Preparation of a bacterial cell solution: Test bacteria were inoculated and cultured on a nutrient agar medium for 24 hours at 35°C. After incubation, the cultures were diluted to 10⁸ cells per ml with sterile physiological saline, which was used as the bacterial cell solution.
- Inoculation and culture of the bacterial cell solution: The test specimen was inoculated with the bacterial cell solution of 100ml and cultured at 25%.
- Viable cell counts: The above-mentioned test specimen was added into SCDLP broths three times - 30 seconds, one minute and 5 minutes after the culture, respectively-. And then the broths were diluted with an nutrient agar medium by a factor of ten, which was used as the test solution. And next, the test solution was added into SCDLP broths and cultured for 48 hours at 35°C. After incubation, the formed colonies were counted, which was converted into viable cell counts. And, the same test was conducted using phosphate buffered saline instead of an nutrient agar medium.

Examining body: Higiene & Microbiology research center

Anti-virus test

Virus strain α
● Sprayed two kinds of films with the product (They were left for 1 month)

Test results shown 5 minutes after spraying



*Evaluation method

(According to Japan textile products quality and technology center)
Sample: A film sprayed with NOWCARE
The amount of NOWCARE used: 1second -2 seconds/100cm²
Virus: Enveloped viruses
The amount of viruses



A product which decomposes and deodorizes odors and bad smells coming from organic materials and that can retain odorless conditions! Neither a deodorant nor an air freshener.... This is a natural mineral mist that purifies air.

NANOTOTALE™

Natural mineral mist

Use "NANOTOTALE™" to get rid of bad smells of fabrics which can not be washed so often or odors of things which have been left even after cleaning on a daily basis. It keeps the living space comfortable. The main components are minerals extracted from rocks accumulated from ancient times. (*It is made in Japan.)

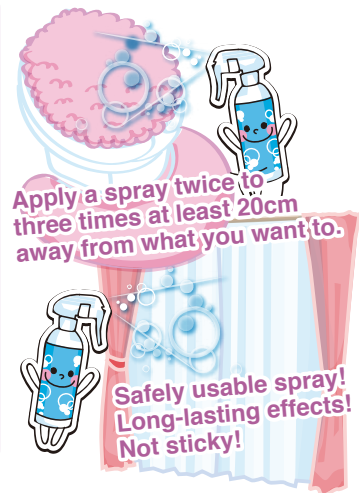
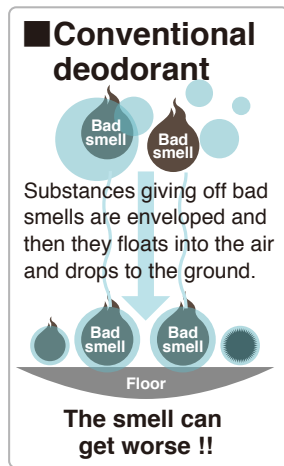
Use it to deodorize things which remains bad smells even after cleaning or which cannot be washed frequently.



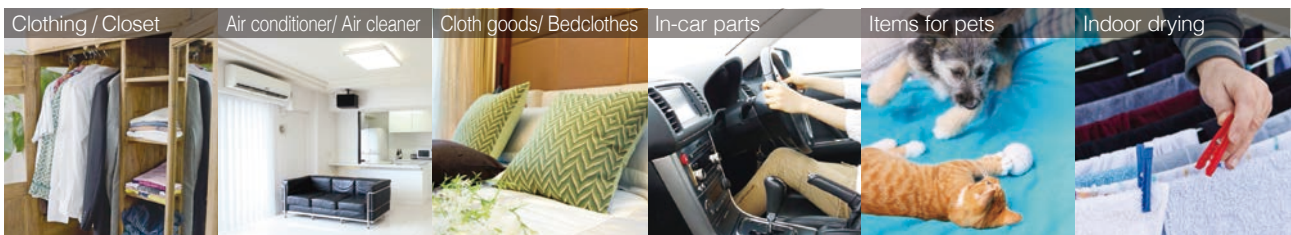
Mechanism >>>

Wonderful mineral !

This is neither a deodorant nor an aromatic. Using the minerals, extracted by a special method, continuously provides two functions - ion exchange (bonding) and catalysis (decomposition) - . The natural mineral mist decomposes and deodorizes unpleasant smells and organic materials to purify the air.



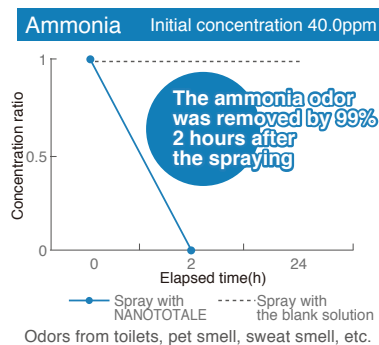
- Apply a spray at least 20cm away from what you want to.
- It is recommended that you apply a spray about 5 times per one square.
- Its deodorizing and antibacterial effects last long when it is sprayed on curtains and wall fabrics, to which mineral ions are easily attached.



Specifications >>>

Thorough decomposition of the source of odors

In a test conducted by a third-party institute, the fabric samples, on which NANOTOTALE was sprayed and then were dried out naturally for about 1 week, were used to collect the data.



Line up >>>

Deodorizing/ Antibacterial spray Indoor clothes drying spray Air conditioning spray



Scan the QR code for more detail.



Double-faced Adhesive Tape

Double-faced tape for non-woven fabrics and film base materials

Product name	Composition	Base material	Number of release liners	Standard size			Color	Initial adhesion	Adhesion (N/25mm)	JIS holding power (mm)	Feature	Application
				Thickness (mm)	Width (mm)	Length (m)						
Double-faced Tape 570E		Non-woven fabric fabrics	1	0.12	10~1,200	20/50	Translucence	Good	18.3	0.2	Strong adhesion, weather resistance	Office supplies, stationery and others
		Acrylic										
Double-faced Tape 575F		Non-woven fabric fabrics	1	0.16	10~1,200	20/50	Translucence	Good	22.1	0.3	Strong adhesion, weather resistance	For securing an aluminum nameplate and others
		Acrylic										
Double-faced Tape 5753E		Non-woven fabric fabrics	1	0.2	1,200	20/50	Translucence	Good	20.4	0.4	Strong adhesion, weather resistance, rough surface bonding properties	For securing foamed rubber and others
		Acrylic										
Double-faced Tape 575E		Non-woven fabric fabrics	1	0.14	10~1,000	20/50	Translucence	Good	18.1	0.3	Strong adhesion, weather resistance	For securing cushioning materials, sealing and others
		Acrylic										
Double-faced Tape 5782		Non-woven fabric fabrics	1	0.13	10~1,000	20/50	Translucence	Good	18.6	※0.2	Strong adhesion to urethane foam products, excellent repelling resistance	For adhering to urethane foam
		Acrylic										
Double-faced Tape 5782LSV		Non-woven fabric fabrics	1	0.135	10~1,000	50	Translucence	Good	18.6	0.5	Little odor, Ultra-low VOCs	For adhering to urethane foam
		Acrylic										
Double-faced Tape 595TF		Non-woven fabric fabrics	1	0.17	10~1,200	20/50	Translucence	Good	20.6	0.2	Strong base material	For securing flooring, for recycling
		Acrylic										
Double-faced Tape 560		polypropylene	1	0.13	10~1,200	20/50	Transparency	Excellent	7.8	0.2	Strong base material, high re-releasability	Securing a rearview mirror and cushioning flooring
		Acrylic										
Double-faced Tape 577SA-L		Non-woven fabric fabrics	1	0.13	1,370	50	Translucence	Good	18.9	0.4	Resistance to plasticizer	For adhering to soft PVC materials
		Acrylic										

Double-faced tape for foaming base materials

Product name	Composition	Base material	Number of release liners	Standard size			Color	Initial adhesion	Adhesion (N/25mm)	JIS holding power (mm)	Feature	Application
				Thickness (mm)	Width (mm)	Length (m)						
Double-faced Tape 518TF		Special polyethylene foam	1	1.3	970	10/30	Black	Excellent	※20.3	0.4	Excellent rough surface bonding properties and strong holding power, and attachable to various kinds of adherends	For securing interior or exterior car parts and fixing construction equipment
		Acrylic										
Double-faced Tape 517TF		Special polyethylene foam	1	0.9	970	10/30	Black	Excellent	※19.1	0.3	Initial adhesion and rough surface bonding properties	For tentatively fixing a building interior or exterior board
		Acrylic										
Double-faced Tape 532		Special polyethylene foam	1	1.1	20/1040	10/30	White	Excellent	※32.8	0.7	Strong holding power	For securing a hook hanger
		Acrylic										
Double-faced Tape 533		polyethylene foam	1	0.38	950	15/25	White	Excellent	※18.8	0.2	Excellent rough surface bonding properties and strong holding power at room temperature	For securing a mirror of washstand and furniture
		Acrylic										
Double-faced Tape 535•536		Special polyethylene foam	535 1	1.1	1040	10	White	Good	※18.6	0.2	High cushioning properties and strong holding power	For securing a mirror of washstand and furniture
		Rubber-based	536 2									
Sponge Tape 2310		Polyurethane foam	2	2	450	1	Yellowish gray	Excellent	※26.5	1.0	Repeatable use for positioning, excellent rough surface bonding properties, attachable to a rough surface	For securing flooring
		Acrylic										

Position adjustable double-faced tape

Product name	Composition	Base material	Number of release liners	Standard size			Color	Initial adhesion	Adhesion (N/25mm)	Shear adhesion (N/cm ²)	Feature	Application
				Thickness (mm)	Width (mm)	Length (m)						
Double-faced Tape 530		Special polyethylene foam	1	0.8	950	10/20	White	Good	11.4	31.9	Repeatable use for positioning, excellent rough surface bonding properties, attachable to a rough surface	For securing flooring
		Acrylic										

Acrylic waterproof tape for building openings

Product name	Composition	Base material	Number of release liners	Standard size			Color	Initial adhesion	Adhesion (N/25mm)	Ball tack (1/32")	Feature	Application
				Thickness (mm)	Width (mm)	Length (m)						
Air-tight Waterproof Tape 747WT (double-faced tape)		PET cloth	1	0.22	50/75/100	20	Black	Good	22	27/29	NYG-recommended tape	For making a joint or a connection part airtight and waterproof
		Acrylic										
Air-tight Waterproof Tape 740 (single-faced tape)		PET cloth	—	0.16	50/75/100	20	Black White	Good	20.3	25	Easy to draw out the tape from a roll and cut it by hand	For making a joint airtight and waterproof
		Acrylic										

Double-faced cloth tape

Product name	Composition	Base material	Number of release liners	Standard size			Color	Initial adhesion	Adhesion (N/25mm)	Shear adhesion (N/cm ²)	Feature	Application
		Adhesive		Thickness (mm)	Width (mm)	Length (m)						
Double-faced Tape 610		Fabric	1	0.55	50	15	Beige	Excellent	6.37	34.3	Flexibility, excellent rough surface bonding properties	For fixing a carpet, a mat and others, securing seal rubber for a door of a freezer
		Rubber-based										
Double-faced Tape 615		Fabric	1	1.0	30	15	Black	Excellent	22.0	44.1	Excellent rough surface bonding properties, high resistance to water and weather	For tentatively fixing building materials, sealing a joint on a corrugated metal roof
		Butyl rubber-based										

Double-faced structural tape

Product name	Composition	Base material	Standard size			Color	T peeling resistance (N/cm)	Shear adhesion (N/cm ²)	Tensile adhesion (N/cm ²)	Heat resistance (°C)	Feature	Application
		Adhesive	Thickness (mm)	Width (mm)	Length (m)							
Double-faced Tape 5101A		Special acrylic	1.1	-	20	White	35	100	100	200	High resistance to weather and heat, A well-finished connection and flexible part can be realized.	For assembling parts of a door or an exterior material
		Acrylic										
Double-faced Tape 5102A		Special acrylic	0.3	-	40	White	10	140	120	200	(Note:5101A and 5106A have excellent rough surface bonding properties.)	For securing housing or building interior and exterior materials
		Acrylic										
Double-faced Tape 5104A		Special acrylic	0.5	-	40	White	20	120	100	200		For securing car interior or exterior materials
		Acrylic										
Double-faced Tape 5106A		Special acrylic	0.7	-	30	White	25	110	100	200		For securing assembled metal parts and others
		Acrylic										
SEKISUI SJ		Acrylic	0.6	20/24/25/30/50/100	40	-	18	100	-	-	A construction period can be cut without using adhesive	For renewing housing or building wall materials



Building & Construction Masking Tape

Product name	Composition	Base material	Standard size			Color	Adhesion (N/cm)	Tensile adhesion (N/cm)	Elongation (%)	Feature	Application
		Adhesive	Thickness (mm)	Width (mm)	Length (m)						
Paper Masking Tape 653N		Japanese paper	0.095	12/15/18/20/24/30/36/40/50/60/80	18	White	1.90	40.0	2.9	High resistance to solvents/ Not easy to peel off in the process of painting /A residual adhesive is hardly left.	A masking tape for painting general buildings
		Rubber-based									
Paper Masking Tape 655N		Japanese paper	0.1	12/15/18/20/24/30/40/50	18	Blue	1.60	41.2	3.2	A coating line can be well finished./It can be smoothly removed	A masking tape for sealing
		Rubber-based									
Mask Light Tape 730		Polyolefin fabric	0.13	25/38/50/75/100	25	Green, Blue, Translucence	2.3	52.9	13	This is made of a resilient material so that it can be smoothly drawn out from a roll and easily cut by hand	For tentatively fixing materials requiring for curing
		Acrylic									
Fit Light Tape 738		Recycled chromium-containing PET	0.11	25/38/50/75	25	Green, Blue, Translucence	2.2	40	25	This is made of a flexible material so that it can tightly attach to a rough surface and be easily removed	For tentatively fixing materials requiring for curing
		Acrylic									
Smart Cut Tape 833		PE	0.12	38/50	25	Orange	2.2	46	23	Film-type tape with smooth texture, which can be easily cut by hand	For curing flooring
		Acrylic									
Spatt Light Tape 733		PET cloth	0.11	38/50/100	25	Green, Translucence	2.1	36	19	This tape can be cut well by hand	For tentatively fixing materials requiring for curing
		Acrylic									
Fit Light Tape 736 (strong adhesive)		PET cloth	0.12	50/75/100/150	25	Mango	3.3	40	30	A strong adhesive masking tape which is high resistant to heat and hard to tear	Suitable for outdoor curing and curing an uneven surface
		Acrylic									

1) Please avoid sticking the masking tapes to plain wood, otherwise, it could lead to environmental pollution.

2) Please use the tapes on a trial basis before use because a residual adhesive, discoloration or damage on the adhesive side may be seen on some adherend or some objects' surfaces to be painted.



Aluminum Tape

Product name	Composition	Base material	Standard size			Color	Adhesion (N/cm)	Tensile adhesion (N/cm)	Elongation (%)	Feature	Application
		Adhesive	Thickness (mm)	Width (mm)	Length (m)						
Aluminium Tape 951		Aluminum foil + Polyester	0.08	750	20/50	Silver	6.9	52.9	3	High mechanical strength and strong corrosion resistance	For making building materials and kitchens water- and dust- proof
		Acrylic									
Aluminium Tape 955		Aluminum foil	0.07	950	20/50	Silver	6.73	32.3	4	High heat- and water-resistance	For protecting and repairing air-conditioning equipment or duct insulation materials, and making them electrically conductive
		Acrylic									

Note 1) Adhesion was measured by a 180°peel test in conformity with JIS Z 0237. (Adhesion of the items marked with a * was measured by a 90°peel test.)

2) A holding power test in conformity with JIS Z 0237 was conducted at a temperature of 40°C. (The holding power with a * mark was measured at a temperature of 80°C using a weight of 500g.)

Contact
address

Sekisui Chemical Co.,Ltd. High Performance Plastics Company

Fire Protection Materials Division

<https://www.sekisui.co.jp/fp> ✉ fp-toiawase@sekisui.com

Fire-resistant thermal expansion material	Fi-Block® (for fire stopping system)	P.7
Fire-resistant thermal expansion material	Fi-Block® (for door, window)	P.39

Specialty Chemicals Division

<https://www.sekisui.co.jp/cs> ✉ ccr-info@sekisui.com

Chlorinated polyvinyl chloride resin	CPVC Resin & Compound	P.9
CPVC compound	Durastream™	P.10
Thermo-expandable microspheres	ADVANCELL® EM	P.55
Water-soluble film	ADVASOL	P.56

Functional Tape Division

<http://www.tutuminet.com> ✉ sekisui-tape@sekisui.com

Strong bonding tape	SEKISUI SJ	P.31
Adjustable	Double-faced Tape 530	P.33
Plasticizer-resistant	Double-faced Tape 577SA-L	P.34
Air-tight waterproof tape	747WT (double-faced tape) 740 (single-faced tape)	P.35
Masking tape	Masking tape	P.37

Interlayer Film Division

<http://www.s-lecfilm.com> ✉ bimso@sekisui.com

Architectural interlayer film	S-LEC™ Clear Film (Standard interlayer film)	P.45
	S-LEC™ Sound Acoustic Film (Sound insulation interlayer film)	P.46
	S-LEC™ Solar Control Film (Heat insulation interlayer film)	P.47
	TALKING LIGHT™ <small>In Development</small> (Self-luminous interlayer film)	P.48

□ Sekisui Material Solutions Co., Ltd.

<http://www.sekisui-ms.co.jp>

Foamed polyolefin insulation	THERMOBREAK®	P.11
Non-combustible damping sheet	CALMMOON Sheet	P.13
Damping sheet for metal roof	Bivres Roof Sheet	P.15
Sound-insulating sheet	Bivres Floor Sheet	P.16
Polypropylene foam board	Zetlon®	P.17
Fast, temporary access road construction	Plastic Road	P.21
Cross-linked polyolefin foam	Softlon® S	P.41
Insulation material for corrugated metal roofs	Softlon® SK	P.43
Open cell physically crosslinked polyolefin foam	Softlon® OPC	P.43
Thin cross-linked polyolefin foam	Volara	P.44
Cross-linked polyolefin foam	Fabricated Softlon®	P.44
Anti-allergen agent	Allerbuster™	P.59
Antivirus processing agent	Viru-taker	P.61
Virus removing and disinfectant spray	NOWCARE	P.63
Natural mineral mist	NANOTOTALE™	P.64

□ Sekisui Techno Molding Co., Ltd.

<http://sekisui-techno-molding.jp>

Underground rainwater management solution	Cross-Wave	P.19
New concept sun shade	Airyshade	P.23

□ Sekisui Fuller Co., Ltd.

<https://www.sekisui-fuller.co.jp>

Adhesive joint filter	S-Dine® Joiner-W	P.25
Highly resistant and super durable grounding resistance reducing agent	DOUDEN CRETE	P.26
Modified silicone	Adhesive	P.27
Modified silicone	Sealant	P.29

□ Sekisui Nano Coat Technology Co., Ltd.

<http://www.sekisuinct.co.jp>

Multi-functional heat-shielding net series	Cool Net Heat Insulation	P.49
	ECO AIRIUS	P.49
	ECO AIRIUS SCREEN WINDOW	P.49
A heat shielding curtain	TESORO	P.51

□ Sekisui Polymatech Co., Ltd.

<https://www.polymatech.co.jp> ✉ bimso@sekisui.com

Cushioning materials	G-Polstar	P.57
Cushioning materials	EXAGEL	P.57
Damping materials	Pantel GEL	P.58
Damping materials	Hybrid Damper	P.58
Heat resistance and electrical insulation	Silicone Thermal Conductive Sheet	P.58

□ Sekisui Seikei Co., Ltd.

<http://www.sekisuiigusa.jp>

Highly functional tatami	MIGUSA	P.53
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<https://www.sekisui.co.jp>

