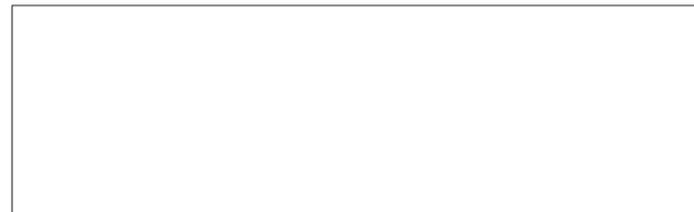


NEWSTACLEAN®

NEWSTACLEAN®

Clean Room Material

Functional Material



Dust-controlling clean paper for clean rooms

Features of STACLEAN: Dust control

One of the causes of dust rising from plain paper is pigment. Unlike plain paper and synthetic paper that stir up the dust, pigment is not used for coloring. Blue or violet dyes (liquid) are used for coloring.

While short fibers are used for plain paper, long fibers are used for STACLEAN to strongly entangle the fibers and prevent them from falling out.

STACLEAN is impregnated with acrylic resin, which bonds fibers to prevent them from falling out.

Dust-controlling STACLEAN ensures excellent copy quality and printability, as well as workability for smooth cutting.

RC Series can be recovered and recycled after use.

The incineration method is the same as that used for plain paper.



Technical Data

AS-STACLEAN ■ Electronic Photomicrograph ■ Dissolution Test ■ Measurement of Electric Characteristics

Electronic Photomicrograph

Surface: 500 magnifications

Cross Section: 750 magnifications

Dissolution Test

10 minutes after mixing Water resolution down 10 times

Almost completely resolved.
Recyclable as standard NEW STACLEAN RC.

Test Method:
Put 40g of 2cm by 2cm square paper in 2 liters of water at room temperature and mix them by TAPPI standard resolution test equipment. Check duration time of complete resolution.

Electric Characteristics

*1 Surface Resistivity (Ω)	Face	1.0 × 10 ⁶
	Back	1.3 × 10 ⁶
*1 Volume Resistivity (Ω/cm ³)		1.19 × 10 ³
*2 Half-Volume Period of Static Electricity (Sec)	Face	L.T. 0.1
	Back	L.T. 0.1

Measurement Environment: Temperature : 20°C: RH : 30%

*1 Surface and Volume Resistivity
Measured by Loresta AP

*2 Half-Volume Period of Static Electricity
Measured by STATIC HONESTMETER TYPE S-5109 after charging 10KV voltage

*Figures shown at the left are not guaranteed values but measured values.

NEW STACLEAN

- Electric characteristics
- Restriction of Hazardous Substances
- Comparison with conventional products [dissolution, dust generation]

Electric Characteristics

Sample: NEW STACLEAN RC; measuring conditions: ambient temperature 23°C, humidity 50%

Surface electric resistance (Ω)	*1	Front	1.4 × 10 ¹¹	*1 Surface electric resistance Measured by ADVANTEST (B43HIGH TMEGOHM METER TR-8601)
		Back	1.4 × 10 ¹¹	
Electrostatic half-time (sec)		Front	0.45	*2 Electrostatic half-time Measuring of electrostatic half-time after applying voltage 10KV (STATIC HONESTMETER TYPE S-5109)
Positive charge	*2	Back	0.40	

* Figures shown at the left are not guaranteed values but measured values.

■ Restriction of Hazardous Substances of EU member countries (RoHS command)
NEW STACLEAN RC is not intentionally added six type of hazardous substance that are included in electrical and electronics devices, lead, mercury, cadmium, chromium (VI), polybrominated biphenyl, and polybrominated diphenyl ether.

Comparison Tests with Conventional Products

Dissolution comparison test

TAPPI (Technology of the American Pulp & Paper Industry)
Standard pulp dissolution test results.

NEW STACLEAN RC	Conventional product
△	X
○	X
○	X
○	△

○ : completely dissolved
△ : partially dissolved
x : not dissolved

* Test method:
Paper 40g cut into about 2cm square is put in water of 2 liters at ordinary temperature and time to complete dissolving is measured using a pulp dissolution test equipment conforming to TAPPI standard.

Contents

NEW STACLEAN	
AS-STACLEAN Technical Date	1
NEW STACLEAN RC. PPC	2
NEW STACLEAN RC for Printing	2
EX-CLEAN PPC	3
AS-STACLEAN	3
NEW STACLEAN RC Notebook	4
NEW STACLEAN HG Notebook78	4
NEW STACLEAN Laboratory Notebook78	4
NEW STACLEAN Binder	5
NEW STACLEAN File	5
NEW STACLEAN Index Card	5
NEW STACLEAN RC Pocket Notebook	6
NEW STACLEAN Tack Memo	6
NEW STACLEAN Tag Tack	7
NEW STACLEAN RC Form	7
STACLEAN Thermal PA2	8
STACLEAN Protec Cobaless	8
STACLEAN Water Box	8
STACLEAN Special Products	9
STACLEAN Tack PW	10
STACLEAN Tack MR2	10
STACLEAN Repeel	10
STACLEAN Non-Silicon Label	10
STACLEAN Bar Code Label	11
Heat-resistant Label	11
Alcohol-resistant Thermal Label	11
STACLEAN NB/NBMS	12
NIL	12
Wrap Clean G, GP	12
Wafer Spacer	13
STACLEAN Core	13
Clean Room Material	
LEDUAL	14
STAT-3S	15
ST-678	15
Cera-PET	15
STAT-FDM	15
Techno Wiper CRN500	16
Techno Wiper CRN201C	16
Techno Wiper LT100	16
Techno Wiper ECO-100	16
Clean Wiper WIP	17
CRECIA Techno Wipe C100	17
CRECIA Techno Wipe RN100-M	17
STAPOUCH	18
Anti-Static Clear File STAT-3SF	18
Conductive File	18
Conductive PVC products	19
Star Foot Clean Mat K	19
Functional Material	
Static Intercept	20
Intercept 3	20
Shrink Intercept	21
Static Intercept Inner BOX	21
Desi-Clay	21
The principle of rust of Intercept Technology	22
Comparison with VCI and anti-corrosion oil	22
Intercept technology use cases	23
Packing cost comparison of anti-rust oil and static intercept	23
PROCESTA PE	24
PROCESTA NT-F	24
PROCESTA PI	25
Procesta Antistatic PP	25
Ridged Clean	26
Ridged Clean PE	26
Marking Label	26
EC Cleaner	27
Micro Catch	27
MC-PAD	27
Pylon PK Tape	28
Spacer LCP-200 for Board Protection	28
Corporate Profile	29

NEW STACLEAN RC. PPC

[Features]

- ▶ 100% dissolvable dust-free resin-impregnated type paper.
- ▶ Recyclable.

Sheet				64g/m ²
Product No.	Size	Color	Sheets/pack	Packs/case
SC64RBA35	A3	Blue	500	4
SC64RBA45	A4			8
SC64RBA55T	A5			8
SC64RBB45	B4			4
SC64RVA35	A3	Violet	500	4
SC64RVA45	A4			8
SC64RVA55T	A5			8
SC64RVB45	B4			4

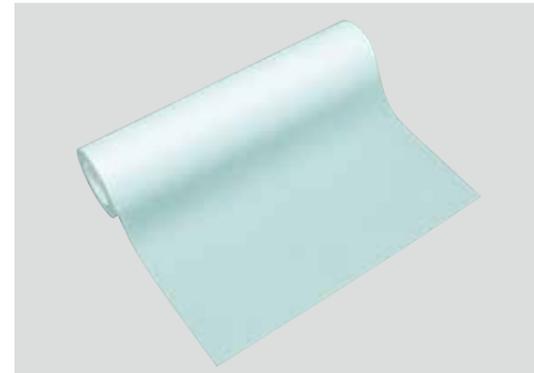
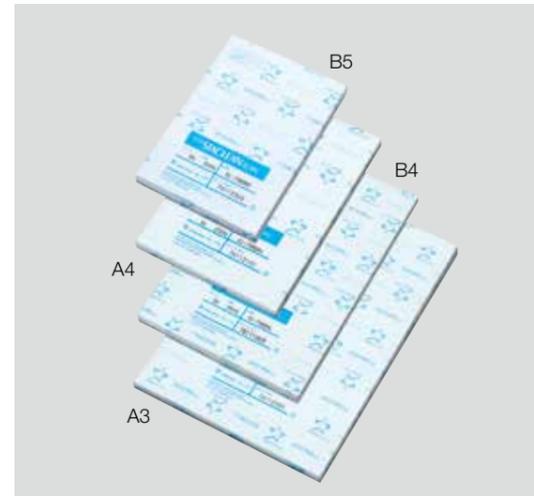
Sheet				72g/m ²
Product No.	Size	Color	Sheets/pack	Packs/case
SC75RBA3	A3	Blue	250	5
SC75RBA4	A4			10
SC75RBB4	B4			5
SC75RBB5	B5	Pink	250	10
SC75RPA3	A3			5
SC75RPA4	A4	10		
SC75RVA3	A3	Violet	250	5
SC75RVA4	A4			10
SC75RVB4	B4			5
SC75RVB5	B5			10
* SC75ROA3	A3	Orange	250	5
SC75ROA4	A4			10
SC75RYA3	A3	Yellow	250	5
SC75RYA4	A4			10
SC75RGA3	A3	Green	250	5
SC75RGA4	A4			10
SC75RWA3	A3	White	250	5
SC75RWA4	A4			10

*This product is a special order.

Sheet				100g/m ²
Product No.	Size	Color	Sheets/pack	Packs/case
SC100RBA3	A3	Blue	200	5
SC100RBA4	A4			10
SC100RVA4	A4	Violet	200	10

▶ Best suited for facility drawings, etc. to be brought into a clean room.

Roll				72g/m ²
Product No.	Size	Color	Rolls/case	
SC75B332SN	594mm × 150m 3 inch	Blue	2	

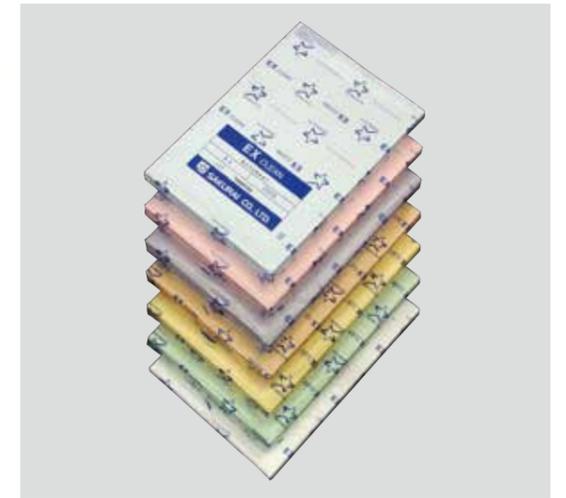


EX-CLEAN PPC

[Features]

- ▶ Low price, low particle and 100% dissolvable dust-free-resin impregnated type paper.
- ▶ Recyclable.

Sheet				72g/m ²
Product No.	Size	Color	Sheets/pack	Packs/case
EX72BA3	A3	Blue	250	5
EX72BA4T	A4			10
EX72PA3	A3	Pink	250	5
EX72PA4T	A4			10
EX72VA3	A3	Violet	250	5
EX72VA4T	A4			10
EX72YA3	A3	Yellow	250	5
EX72YA4T	A4			10
EX72GA3	A3	Green	250	5
EX72GA4T	A4			10
EX72WA3	A3	White	250	5
EX72WA4T	A4			10



AS-STACLEAN

[Features]

- ▶ Electric conductivity of 10⁶Ω or less.
- ▶ Dusting characteristic is equivalent to that of STACLEAN.
- ▶ Suitable for copying.
- ▶ Recyclable.

Sheet				72g/m ²
Product No.	Size	Sheets/pack	Packs/case	
SCAS72A4	A4	250	5	

* This product is antistatic, so the toner may not be fixed depending on the type of copier or laser printer.

Effective against static electricity during manufacturing process and product delivery.

Used as insertion paper for wafer, PCB, chip tray and other electronics products.



NEW STACLEAN RC for Printing

Sheet				
Product No.	Size	Color	Weight	Sheets/Pack
SC50RB07Y	880mm × 625mm	<27.5>	50g/m ²	250
SCN64RB17	788mm × 1,091mm	<55.0>	64g/m ²	
SC64RB07	625mm × 880mm	<35.0>		
SCN64RB07Y	880mm × 625mm	<35.0>	64g/m ²	
SCN64RV07	625mm × 880mm	<35.0>		
SC72RB4/6	788mm × 1,091mm	<62.0>	72g/m ²	
SCN72RB07	625mm × 880mm	<39.5>	72g/m ²	
SC72RP07	625mm × 880mm	<39.5>		
SC72RY07	625mm × 880mm	<39.5>		

Sheet				
Product No.	Size	Color	Weight	Sheets/Pack
SC72RG07	625mm × 880mm	<39.5>	Green 72g/m ²	250
SC72RO07	625mm × 880mm	<39.5>	Orange 72g/m ²	250
SC72RW07	625mm × 880mm	<39.5>	White 72g/m ²	250
SCN72RV07	625mm × 880mm	<39.5>	Violet 72g/m ²	250
SC100RB07	625mm × 880mm	<55.0>	Blue 100g/m ²	250
SC130RC07	625mm × 880mm	<71.5>	White 130g/m ²	
SC130G4/6	788mm × 1,091mm	<112>		
SC175G4/6	788mm × 1,091mm	<150.5>		
SC175RC07	625mm × 880mm	<96>	175g/m ²	100



NEW STACLEAN RC Notebook

【Features】

- ▶ 100% dissolvable dust-free resin-impregnated type paper.
- ▶ Recyclable.



Color:Blue 64g/m²

Product No.	Size	Description	Sheets/pad	Pads/case
SNA45BR	A4	5mm		
SNB55BR	B5	Graph paper	32	10
SNA412R	A4	Horizontal line		
SNB512R	B5			



NEW STACLEAN HG Notebook78

【Features】

- ▶ Notebook of thick dust-free paper with increased resistance against folding.



Color:Blue 78g/m²

Product No.	Size	Description	Sheets/pad	Pads/case
78HGA412	A4	Horizontal line	20	20



NEW STACLEAN Laboratory Notebook78

【Features】

- ▶ A must for research & development division for patent application.



Color:Blue 78g/m²

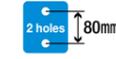
Product No.	Size	Description	Sheets/pad	Pads/case
CBN078	A4	Graph paper	50	10



NEW STACLEAN Binder

【Features】

- ▶ Easy removal of contamination because of special-treated cover.
- ▶ Strong, high-quality dust-free paper binder.



Color:Blue

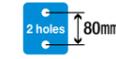
Product No.	Size	Description	Pieces/case
SCBA44		22mm	6
SCBA47	A4	50mm	



NEW STACLEAN File

【Features】

- ▶ Standard dust-free paper file essential for filing documents and materials.



Color:Blue

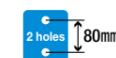
Product No.	Size	Back width	Pieces/case
SCFA4	A4	15mm	20



NEW STACLEAN Index Card

【Features】

- ▶ Index card for NEW STACLEAN Binder.
- ▶ The base material is dust-free paper.



Color:Blue

Product No.	Size	Description	Sheets/pack	Packs/case
SCIDA4	A4	2 holes	10	20



NEW STACLEAN RC Pocket Notebook

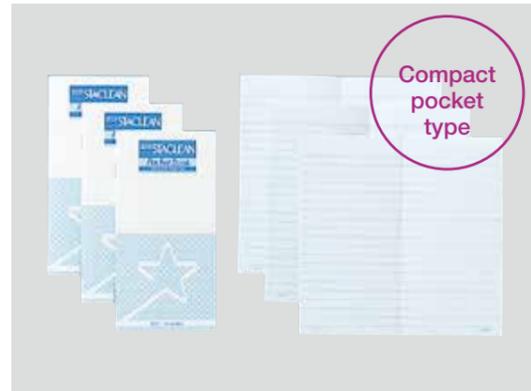
【Features】

- ▶ 100% dissolvable dust-free resin-impregnated type paper.
- ▶ Recyclable.
- ▶ Pocket-type notebook.



Product No.	Size	Description	Sheets/pad	Pads/case
SCPR	80mm X 160mm	Horizontal line	20	10

Color: Blue 64g/m²



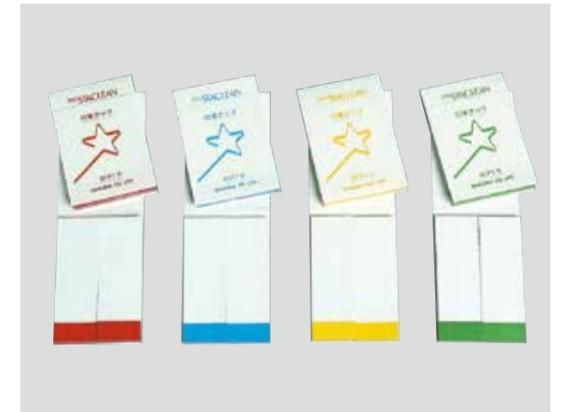
NEW STACLEAN Tag Tack

【Features】

- ▶ Tack memo employing dust-free paper as a base.
- ▶ Can be used as color coding or noting paper within a clean room.

Product No.	Color	Size	Sheets/pad	Packs/case
SCFTR	Red	25mm x 75mm	50	30
SCFTY	Yellow			
SCFTG	Green			
SCFTB	Blue			

64g/m²



NEW STACLEAN RC Memo

【Features】

- ▶ 100% dissolvable dust-free resin-impregnated type paper.
- ▶ It can be recycled as used paper after use.

Product No.	Size	Sheets/pad	Pads/case
SCA60R	A6	50	20

Color: Blue 64g/m²



NEW STACLEAN RC Form

【Features】

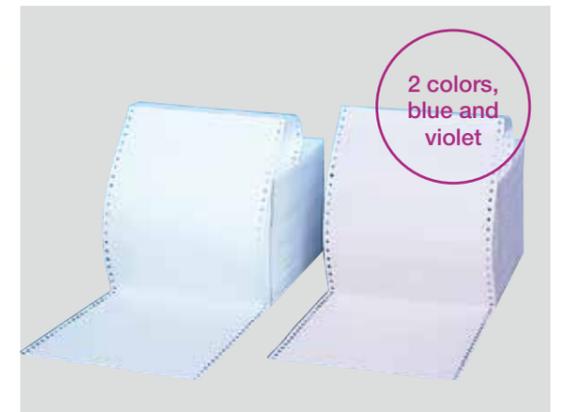
- ▶ 100% dissolvable dust-free resin-impregnated type paper.
- ▶ Recyclable.



Product No.	Size	Description	Color	Sheets/case
SC15RBMJ	15 x 11"	Plain	Blue	2000
SC10RBMJ	10 x 11"			
SC9RBMJ	9 x 11"			

64g/m²

※ Violet color is made-to-order product.



NEW STACLEAN Tack Memo

【Features】

- ▶ Very weak adhesive applied on the upper portion of dust-free paper.
- ▶ Can be peeled cleanly, leaving no adhesive residue.

Product No.	Size	Sheets/pad	Pads/case
SCT50	72mm X 105mm	50	30

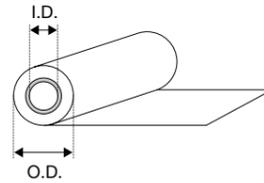
Color: Blue 64g/m²



STACLEAN Thermal PA2

【Features】

- ▶ Dust-free thermal paper.
Available for other sizes than the standard.



Color: Blue 50g/m²

Product No.	Size	I.D.	O.D.	Rolls/case
SCS057PA2	57mm × 25m	13mm	49mm	
SCS5815PA2	58mm × 15m	9mm	38mm	40
SCS080PA2	80mm × 25m	13mm	49mm	
SCS110PA2	110mm × 35m	13mm	57mm	20



STACLEAN Protec Cobaless (Clean desiccant)

【Features】

- ▶ Drying effect without producing dust from the content and bag.
- ▶ Cobalt is not contained in the indicator.

Product No.	Description	Sheets/case
PROW5S	5g/piece	1,000pcs/box



STACLEAN Wafer Box

【Applications】

- ▶ For carrying and storing semiconductor wafers.
- ▶ Cushion material and spacer are separately available.

Color: Blue

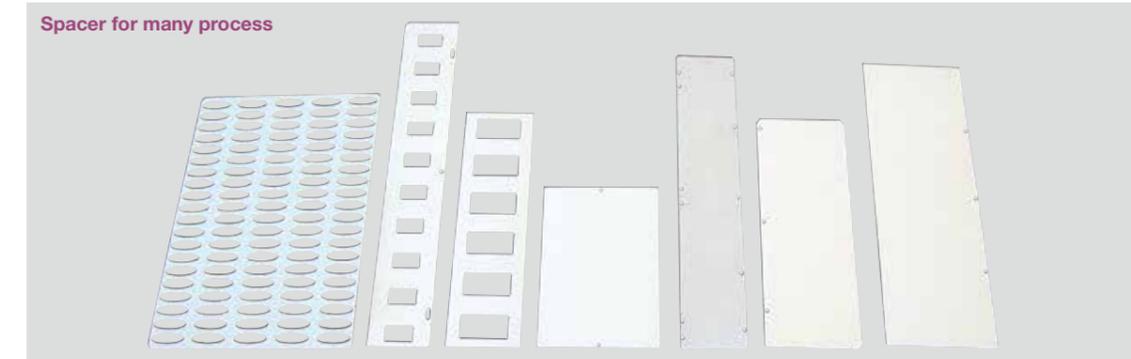
Product No.	I.D.	Effective height	Pieces/case
SCBOX6	155mm	53mm	50



STACLEAN Special Products

- ▶ STACLEAN Paper is base on paper and it can be converted special products for cleanroom use.

Spacer for many process



Roll paper



Stocking box for electric parts



STACLEAN Calendar



STACLEAN Envelope



Special-Order Products

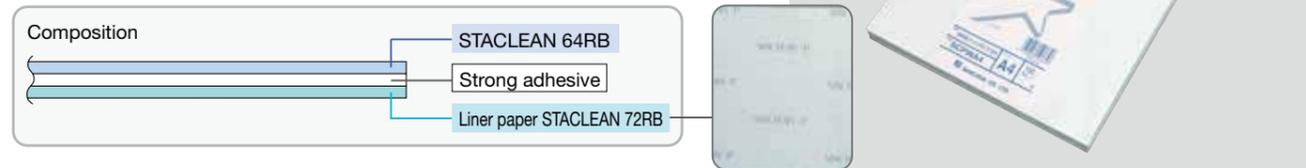
STACLEAN Tack PW (Strong adhesion)

【Features】

- ▶ Dust-free tack paper for clean room.

【Applications】

- ▶ Label, form label, other special-order products.



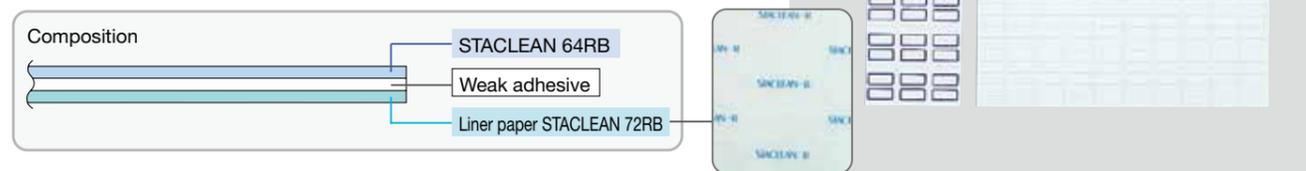
STACLEAN Tack MR2 (Weak adhesion)

【Features】

- ▶ Dust-free tack paper for clean room.
- ▶ Clean removal without leaving adhesive and damaging the surface.

【Applications】

- ▶ Label, form label, other special-order products.



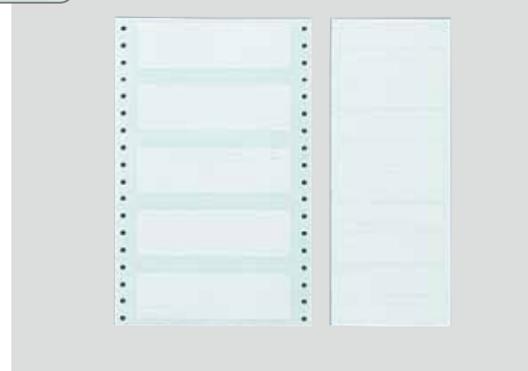
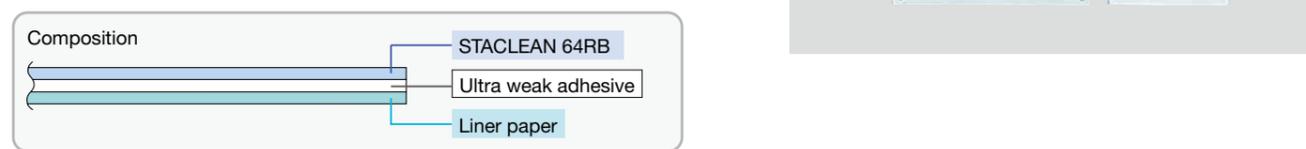
STACLEAN Repeel (Ultra weak adhesion)

【Features】

- ▶ Dust-free tack paper for clean room.
- ▶ Clean removal without leaving adhesive and damaging the surface.
- ▶ Reusable.

【Applications】

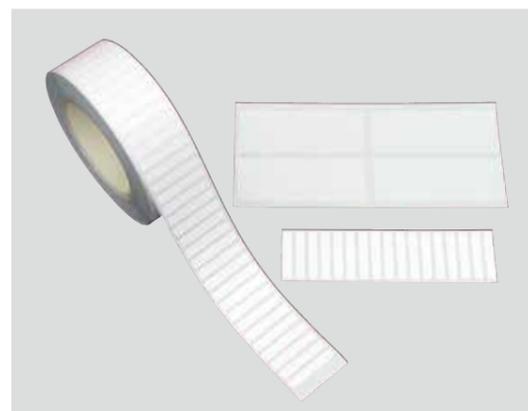
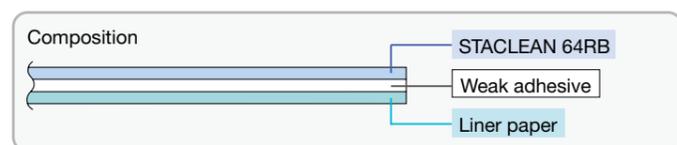
- ▶ Label, form label, other customized products.



STACLEAN Non-Silicon Label

【Features】

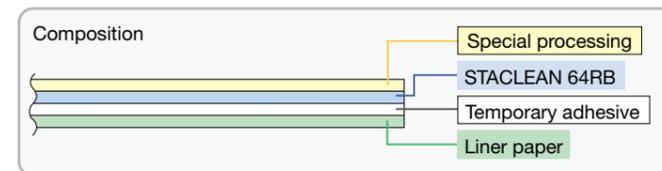
- ▶ Dust-free tack paper for use in a clean room.
- ▶ No silicon is used for liner paper so that the label is free from siloxane contamination.



STACLEAN Bar Code Label (Temporary adhesion)

【Features】

- ▶ Dust-free barcode labels for use in a clean room.
- ▶ Excellent ink fixation from thermal transfer printer ribbon.



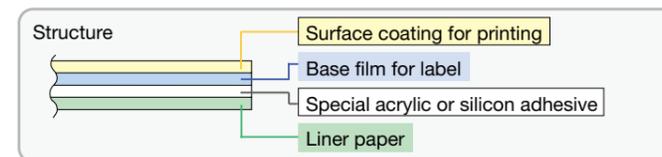
Heat-resistant Label

【Features】

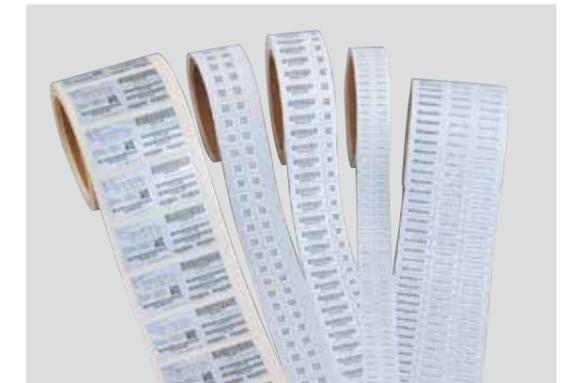
- ▶ Can be used in an environment where heat-resistant or solvent-resistant characteristic are required.

【Applications】

- ▶ Used as indication label such as bar-code label for production control or products delivery, and as masking label.



Base film for label	Thickness	Resist Temp	Application
Polyester	50μm	150°C	For electronic parts shipping label
Polyetherimid	25μm	200°C	For semi-conductor production control
Polyimide	25μm	260°C	For PCB Assembly
Polyimide	50μm	300°C	For electronic parts shipping label

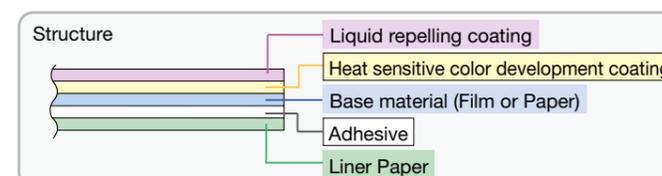


※ Testing heat-resistant temperature in actual usage circumstances is recommended.

Alcohol-resistant Thermal Label

【Features】

- ▶ Remarkably improved alcohol-resistant capability by coating liquid repelling resin.
- ▶ Different grades are available depending on applications.
- ▶ Base material: Choice of paper or film.
- ▶ Adhesive: Choice of permanent or removable. Can be stored in freezer or refrigerator.



※ Soak absorbent cotton in absolute alcohol or IPA, put evenly on surface of label. 30 minutes after observe result and take photos.

STACLEAN NB / NBMS

【Features】

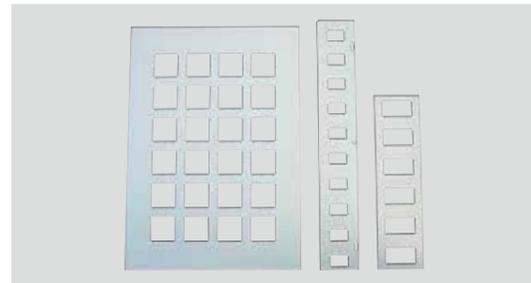
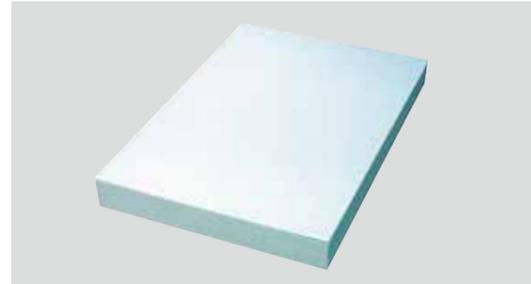
- ▶ Protect electronic products during delivery, conveyance and storage.
- ▶ Neutral (around PH 7.0) clean-paper that gives no bad effect such as rusting or corrosion by touching to the products.

【Applications】

- ▶ Inter-leaf paper for lead-frame, printed circuit board, condenser and wafer Paper frame for cleaning mold during molding process.

Color:Blue

Product No.	Weight (g/m ²)	Thickness (μm)
SC50NB	50	70
SC64NB	64	90
SC100NB	100	140
SC250NBMS	240	300
SC420NBMS	415	500



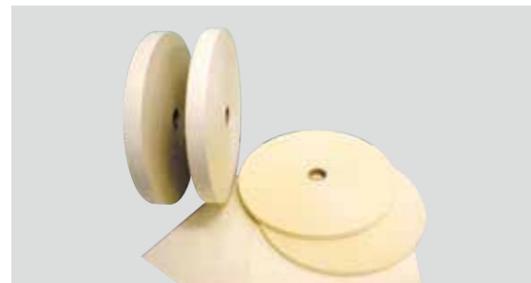
NIL (Clean Craft)

【Features】

- ▶ Low dusting type neutral paper. (around PH 7.0)
- ▶ Protect electronic products during delivery, conveyance and storage.

Color: Cream

Product No.	Weight (g/m ²)	Thickness (μm)
NIL70	70	97



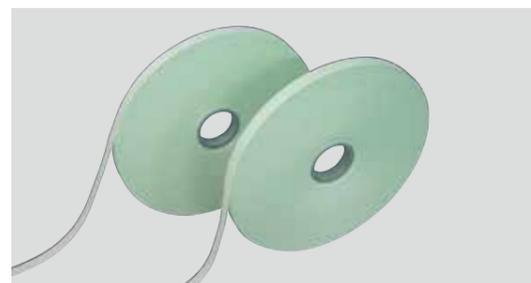
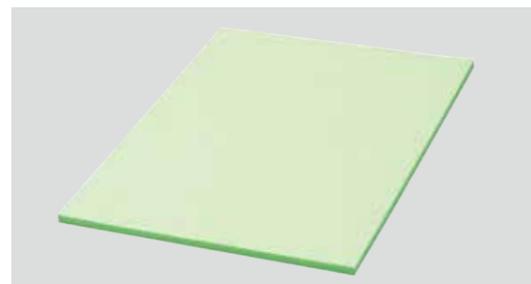
Wrap Clean G, GP

【Features】

- ▶ Low dusting type wrapping paper.
- ▶ Protect electronic products during delivery, conveyance and storage.
- ▶ GP is the same as G but anti-moisture feature is added.

Color: Green

Product No.	Weight (g/m ²)	Thickness (μm)
Wrap Clean G	50	65
Wrap Clean GP	63	78



Wafer Spacer

【Features】

- ▶ Made of NEW STACLEAN RC, STACLEAN NB or AS-STACLEAN.
- ▶ Inter-leaf paper used during wafer inspection and conveyance.
- ▶ Prevent dusting, contamination, scratch and static charge.

Surface Processing

Flat: Standard smooth surface.

Emboss: Add around 20μm roughness on surface.

Add features of easier separation and better cushion without increasing thickness.

- ※ Can be also used as inter-leaf paper for chip-tray. (Customizing size of inter-leaf paper is available)

We also have STACLEAN Wafer Box made of NEW STACLEAN RC. Please refer to page 8.

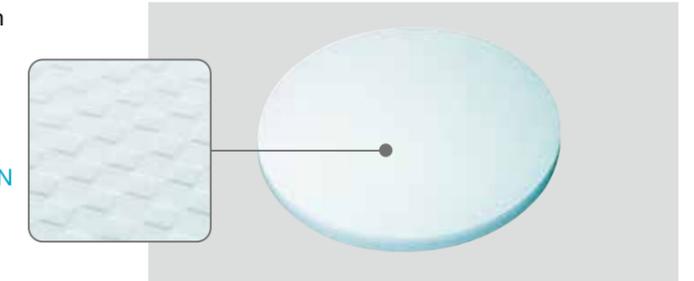
Shape and Size



Wafer Diameter	D (mm)
4"	100
5"	125
6"	150
8"	200
12"	300



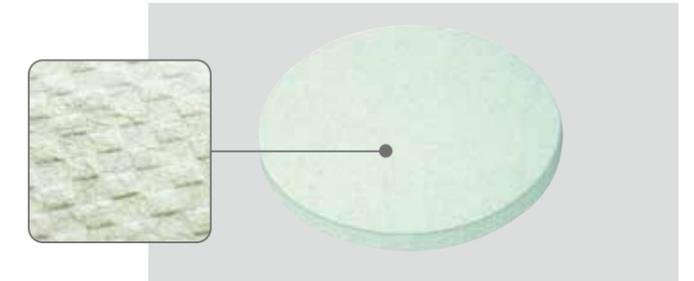
STACLEAN NB Flat



STACLEAN NB Emboss



AS-STACLEAN Flat

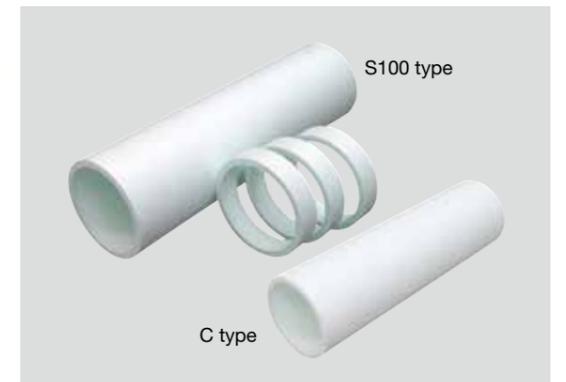


AS-STACLEAN Emboss

STACLEAN Core

【Features】

- ▶ Dusting-prevented core. Inside diameter of 2 inch to 8 inch as substitute for plastic or paper tube.
- ▶ S100 type: Can be cut in 100% dust-free paper specification.
- ▶ C type: The tube is sided, on front and back, with STACLEAN. ※ This type cannot be cut.



Clean-room LED



LEDUAL (LED Fluorescent Lamp)

Simple energy saving and a construction-free

Fluorescent lamp (LED) construction-free

Normal LED fluorescent lamp will require remodeling of fluorescent lighting fixtures at the time of introduction. However, LEDUAL to achieve energy savings when it is replaced the existing fluorescent tubes.

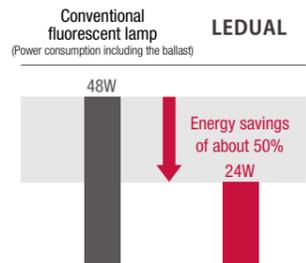
There is no need to stop the sales and production line on a large scale at the time of installation and reduce deployment costs.

Corresponding Ballast	Other Company (direct only)	Other Company (need work)	LEDUAL
Glow Start Type	×	○	○
Rapid Start Type	×	○	○
Inverter Type	×	×	○
Power Directly	○	○	○

* There is the case that I can not use a fluorescent lamp some instruments. Can be installed in the power directly (AC) work in that case.

Energy savings of up to 50%

Power consumption of LEDUAL is 24 ~ 30W but normal fluorescent lamp of 40 type (including ballast) is 36 ~ 48W power consumption. LEDUAL can be an energy savings of up to 50%. At the same time, LEDUAL can cut up to 50% Co2 emissions.

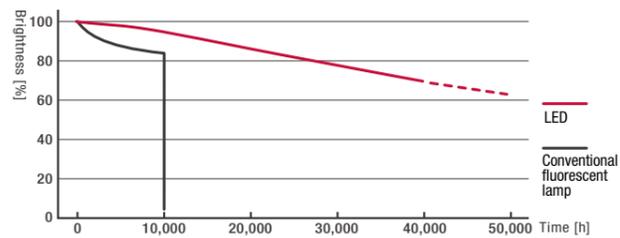


* Reduction value of the power consumption will vary from fluorescent lighting fixtures use.



Long-life lamp of 40,000 hours

Life of LEDUAL is 40,000 hours but normal life of fluorescent lamp is for 8,000 to 12,000 hours. It is a long life of about five times that of fluorescent lamp LEDUAL can be decreased the replacement cost.



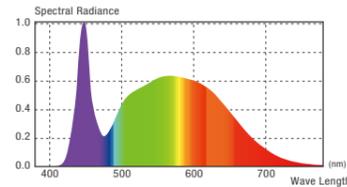
* It is time total luminous flux drops to 70% the rated life. Display is a design life and it does not guarantee the life of the product.

Eco-friendly and reliable design

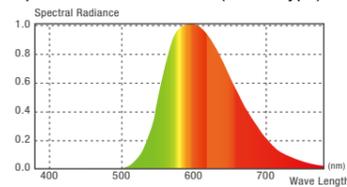
- Lamp fall prevention**
LEDUAL is adopted the aluminum heat sink of the D-shaped structure. LEDUAL can prevent deflection or change of tube length due to aging and high heat dissipation effect.
- Anti-scattering**
LEDUAL is adopted the polycarbonate to the light emitting surface. Not be scattered like glass difficult to break.
- Environmentally friendly materials (RoHS directive compliant)**
Do not use the environmentally hazardous substances, including mercury.



Spectral distribution data (White type)



Spectral distribution data (Yellow type)



Product No.	Product Name	Packing
MTO40BNG13	White type (40W)	20pcs/ctn
MTO40BYG13	Yellow Clear type (40W)	20pcs/ctn
MTO40CYG13	Yellow Diffusion type (40W)	20pcs/ctn

Specification

	Rated supply voltage (V)	Rated supply frequency (Hz)	Max. Power consumption** (W)	Rating life*1 (h)	Directly under illumination (lm/lx)	Total luminous flux** (lm)	1/2 Angle luminaire	Size (mm)	Weight (g)	Base	Light source color** (K)	Ambient temperature** (°C)
White type	AC100~260V±15%	50/60	24	40,000	440	2,000	150°	φ34×1,198	465	G13	5,000	-10°C~+40°C
Yellow type	AC100~260V±15%	50/60	24	40,000	370	1,500	120°	φ34×1,198	465	G13	2,300	-10°C~+40°C

*1 It is time to the total luminous flux drops to 70% the rated life.
*3 There are slight variations in the LED module.

**2 It is the power consumption of the products of the body when using 100V.
*4 Because it is for indoor use, please refrain from the use of an environment where a droplet of water is condensation it takes.

Clean Packaging Material

STAT-3S (Non-additive anti-static polyethylene film bag)

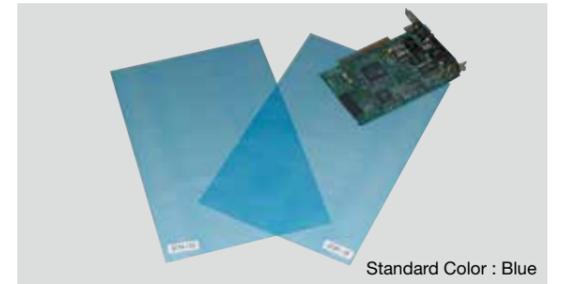
【Features】

- ▶ Polymer itself has anti-static characteristics so that no contamination transfer to contents.
- ▶ Surface Resistivity: Outside; Less than 10¹¹ Ω, Inside; Less than 10¹⁰ Ω

Standard Size (Color : Blue)

Product No.	Size			Pieces/Pack
	Thickness (μm)	Width(mm)	Length(mm)	
3S-0715	50	70	150	2,000
3S-1015		100	150	
3S-1020		100	200	
3S-1525		150	250	
3S-2030		200	300	
3S-2535		250	350	
3S-3040		300	400	500
3S-3545		350	450	
3S-4050		400	500	

Customizing size is available.

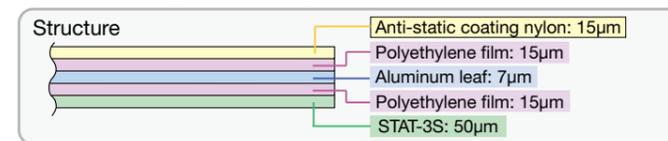


- ▶ Thickness: 40μm ~ 150μm
- ▶ Width: 50mm ~ 1,200mm
- ▶ Color: Blue Pink Green Yellow Natural (Transparent)

ST-678 (Static shield, gas barrier, anti-moisture bag)

【Features】

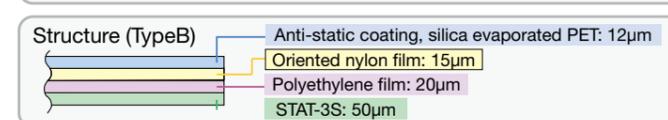
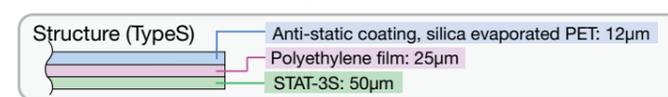
- ▶ High reliability anti-moisture barrier bag.
- ▶ Most inner layer of the bag is STAT-3S.



Cera-PET (Transparent, anti-moisture, gas-barrier, non-additive, anti-static bag)

【Features】

- ▶ Aluminum leaf and vinylidene chloride are not used. Instead of those, silica is evaporated to add the bag gas barrier and anti-moisture characteristics.
- ▶ Most inner layer of the bag is STAT-3S.



STAT-FDM Powder for electrostatic discharge dust explosion prevention bag (Drum inside bag)

【Features】

- ▶ Static shielding bag failure by the FDA compatible material to exclude material to migrate into the powder (For Blasting dust prevention bag)
- ▶ It conforms to the MIL-PRF81705D & ASTM-D257 standard as a measure of the anti-static failure prevention.
- ▶ Heat-sealed bag of adhesion strength and stable tough film (for 25kgs)



※ Can is not included.

Techno Wiper

CRN500 (Micro Fiber High Performance Knitted Type Wiper)

【Features】

- ▶ Low dust generation, low dissolved ions, high wiping performance.

【Material】

- ▶ Polyester 60%, Nylon 40%

Size	Sheets/bag	Bags/pack
240mm × 240mm	10	10



CRN201C (Conductive Wiper for Static Control)

【Features】

- ▶ Low dust wiper made of micro fiber coated with conductive polymer.
Surface resistivity : $1.0 \times 10^6 \Omega$

【Material】

- ▶ Polyester 82%, Nylon 18%

Size	Sheets/bag	Bags/pack	Packs/case
240mm × 240mm	10	5	2



LT100 (Polyester Knitted Wiper)

【Features】

- ▶ Low dust generation, low dissolved ions, general purpose wiper.

【Material】

- ▶ Fine denier long fiber polyester 100%

Size	Sheets/bag	Bags/pack	Packs/case
150mm × 150mm	100	4	6
230mm × 230mm		3	4



ECO-100 (Wiper made of recycled PET)

【Features】

- ▶ Low dust generation, low dissolved ions eco-friendly wiper made of recycled PET resin.

【Material】

- ▶ Fiber made of recycled PET resin 67%, Polyester 33%

Size	Sheets/bag	Bags/pack	Packs/case
150mm × 150mm	100	4	6
230mm × 230mm		3	4

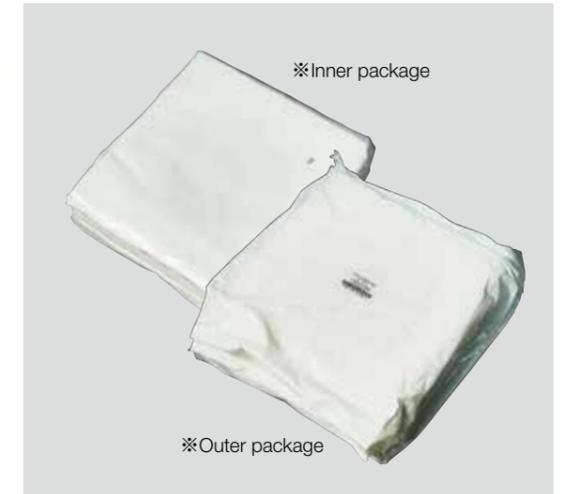


Clean Wiper WIP

【Features】

- ▶ Wiper with excellent performance wiping.
- ▶ Suitable for maintenance and clean room working.
- ▶ 100% polyester wiper.
- ▶ Edges are laser-cut processing.

Product No.	Size	Unit	Packing
WIP3009DLE	9 inch × 9 inch	1ctn	150sheets/box, 10boxes/ctn



CRECIA Techno Wipe C100 (Lyocell Nonwoven Fabric Wiping Cloth)

【Features】

- ▶ Molecule structure is not cut to make Lyocell fiber so that it is strong in dry and wet conditions.
- ▶ Wet strength of Lyocell fiber is higher than that of cotton and rayon, because of less swelling with water.
- ▶ Ideal for wiping in a clean-room due to low dust generation capability.

【Material】

- ▶ Lyocell Fiber 100%

Product No.	Weight	Size	Unit	Packing
C100M	30g/m ²	250mm × 250mm	1ctn	100sheets/Pack, 30packs/ctn
C100S		200mm × 225mm		



CRECIA Techno Wipe RN100-M

【Features】

- ▶ Fiber structure with very little dust.
- ▶ Ideal for wiping in a clean environment.
- ▶ Use heat-sealed fiber.

【Material】

- ▶ Rayon + polyester + polyolefin

Product No.	Size	Unit	Packing
RN100M	250mm × 250mm	1ctn	100sheets/Pack, 30packs/ctn



STAPOUCH

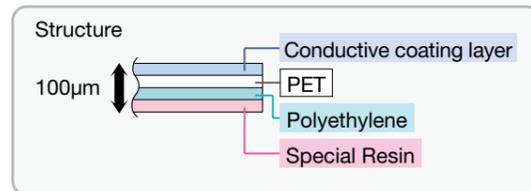
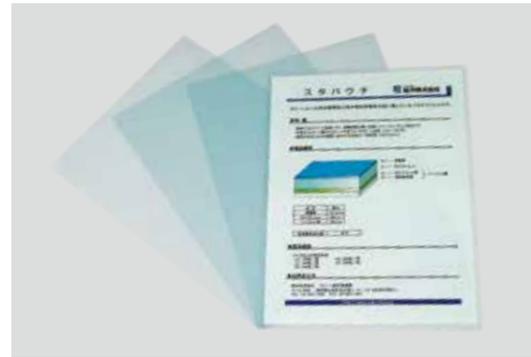
【Features】

- ▶ Anti-static pouch film used in a clean-room for documents on bulletin board or circulation.
- ▶ Conductive substance is coated on base film by using precise gravure coating technology.
- ▶ Can be laminated on document using laminators on the market.

Laminated temperature : 120 ~ 220°C

Surface Resistivity : $10^7 \sim 10^8 \Omega$

Product No.	Size	Pieces/pack
ASSPA3	A3	100
ASSPA4	A4	



Conductive PVC products

【Features】

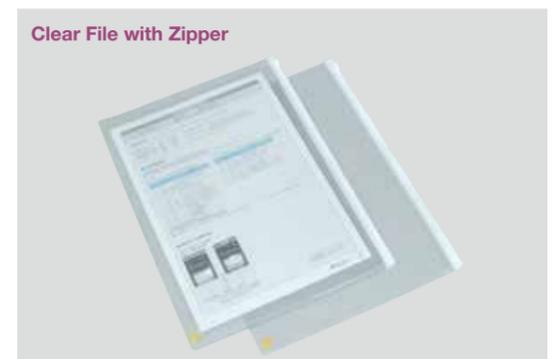
- ▶ PVC is used for soft feeling and converted for special design easy.
- ▶ Surface Resistivity : $10^9 \sim 10^{10} \Omega$
- ▶ Without standard size A4, for example, small quantity & special design can be available.

Name Holder

Size	Packs/case
90mm×110mm	50
75mm×100mm	

Clear File with Zipper

Size	Packs/case
A4	100
A5	

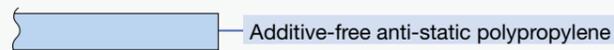


Anti-Static Clear File STAT-3SF

【Features】

- ▶ No contamination by anti-static chemicals because the film is additive free.
- ▶ Surface Resistivity : Less than $10^{11} \Omega$

Structure



Product No.	Size	Pieces/pack
ASCFA4	A4	50



Reference for special use

Book Cover



Protection product for NEW STACLEAN RC Notebook.

Double Clear File



It has two pockets, and one side is shielded two and the other side is shielded three.

Conductive File

【Features】

- ▶ Stable conductivity is realized by the adoption of resin added with conductive carbon. (Surface Resistivity: $10^6 \sim 10^8 \Omega$)
- ▶ Made of polypropylene resin of inorganic gas foaming/conductive grade.
- ▶ No bleed contamination because no anti-static agent is used.
- ▶ Pipe-type antistatic binder.
- ▶ Eco-friendly specification: the binder and cover can be separated and discarded.



File

Product No.	Size	Binding thickness	Pieces/case
ASFA430	A4	30mm	20
ASFA450		50mm	12

Clip board

Product No.	Size	Packs/case
ASCA4	A4	20



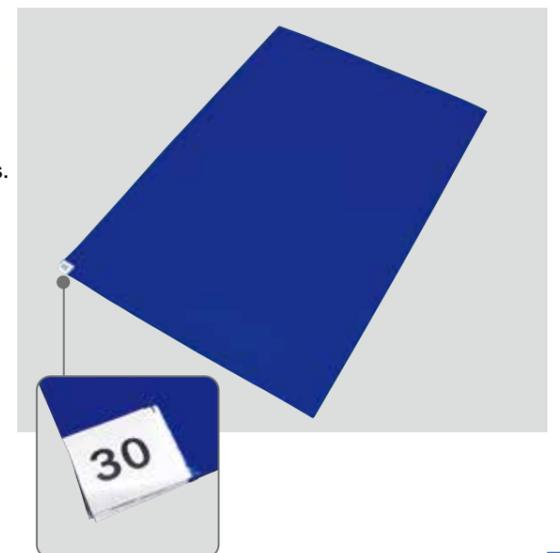
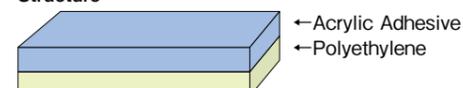
Star Foot Clean Mat K

【Features】

- ▶ Adhesion can catch many particles and express high quality performance.
- ▶ Each sheet has labels (1-30) for identification the rest number of sheets.
- ▶ Low price performance is for cleanroom & food factory use.
- ▶ Without standard size, for example, conductive type & white color can be available.

Product No.	Thickness	Size	Adhesion	Sheets/pack	Packs/case
CLMK69B	50µm	600mm×900mm	Standard	30	8
CLMK69BL	50µm	600mm×900mm	Weak		

Structure



Intercept Technology

It is anti-rust film innovative to prevent corrosion metal, rubber, resin, or the like without the use of anti-rust oil.



Static Intercept

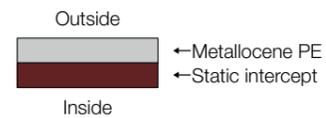
- 【Features】**
- ▶ Standard type of Intercept series.
 - ▶ Rust+ESD countermeasure product.
 - ▶ Long term storage, Export/import transport, Cleanroom use and Packages for electric parts.
 - ▶ Surface resistivity : $10^5 \sim 10^8 \Omega$

Product No.	Thickness	Size	Packing
SI75F600	75 μ m	600mm×50m	1roll
SI75F1200		1,200mm×50m	



Intercept 3

- 【Features】**
- ▶ It is used for gusset back of the car, such as truck.
 - ▶ Metallocene PE of the surface is strongly to puncture, excellent cold resistance, heat resistance, impact resistance, pressure resistance, and the heat-sealing properties.
 - For more information, please contact our sales representative



Product No.	Thickness	Size	Packing
ITS3G95	100 μ m	950mm×800mm×750mm	10pcs/pack



Shrink Intercept

- 【Features】**
- ▶ It is heat-shrinkable film which arranged the static intercept on the inside.
 - ▶ Middle, long term storage, Out-side storage & Large product storage.
 - ▶ Construction method is to shrink by a gas burner such as high temperature dryer.

Product No.	Size	Packs
ITSX6100	6,100mm×45m	1



※Before packing



※After packing

Smelting Facilities Storage

Static Intercept Inner BOX

- 【Features】**
- ▶ It is an inner BOX that can be set in the general-purpose plastic container. (Lid + body)
 - ▶ Inner side of static intercept can effect to an anti-corrosion performance.
 - ▶ Short term storage and domestic transport.

Product No.	Size
IB24H	300mm×432mm×168mm
TP331H	340mm×340mm×100mm

※ 1 The right side image of plastic container is not included in the inner BOX



Desi-Clay (Clay-based desiccant)

- 【Features】**
- ▶ It is a drying agent with high natural mineral water absorption.
 - ▶ Safety is high because it is a natural mineral, you can use it in food applications.
 - ▶ 10g, 20g, 50g, 200g, 300g, of 500g can be available from regular stock.

Specification	Weight	Packing
No Strings	10g	1,200pcs/ctn
	20g	600pcs/ctn
	50g	330pcs/ctn
Strings Attached	200g	80pcs/ctn
	300g	54pcs/ctn
	500g	32pcs/ctn



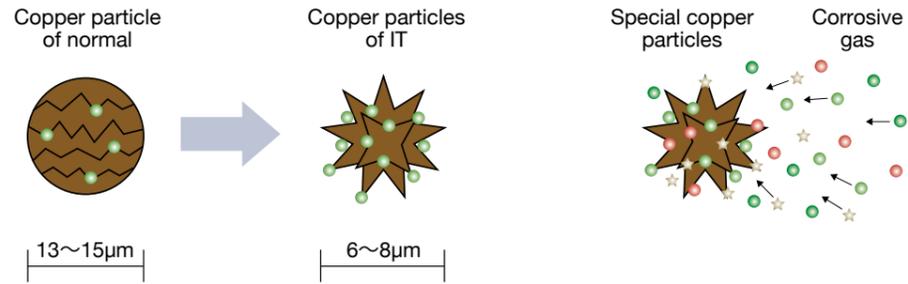
The principle of rust of Intercept Technology



Copper particles are absorbed corrosive gas (such as nitrogen oxides, ozone, hydrogen sulfide, sulfur dioxide, hydrogen chloride) that is floating in the air and can be prevented corrosion of the product.

Neutralize to absorb corrosive gases before attaching to the products

This phenomenon is the effect of copper particles with surface area of 256 times in normal.



However, Intercept Technology does not have the moisture absorption function.

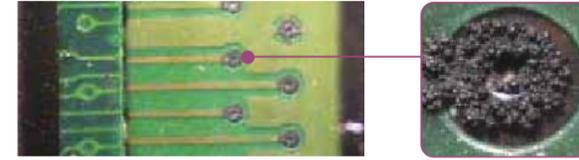
In order to prevent corrosion caused by (including the corrosive gas) moisture, be sure to use Clay desiccant in the case of high humidity condition.

Comparison with VCI and anti-corrosion oil

	Intercept Technology	Anti-corrosion oil	VCI film
Object	All Material (Metal · Resin etc.)	Metal Only	Divided iron and non-ferrous
Way of rust	Absorption & Neutralize	Form the oil film	Anti-rust coating
Membrane Accuracy	Not make oil film	Occurrence unevenness	Occurrence unevenness
Film Removal	No necessary	Removed with a solvent	Removed with a solvent
Residual Film	Nothing	Possibility	Possibility
Humidity Measure	Need (Clay Desiccant)	As required by the case	As required by the case
Validity Period	More than 10 years (Static Intercept)	Varies depending on the environment	3 - 12months (3month by sea)
Reuse	Possible	Impossible	Impossible
Recycling	Possible	Appropriate disposal	Impossible
Environmental Measure	RoHS, TRGS-615,900	Unknown	Amine used (Nitrosamine Detected)
Approvals	MIL-PRF-131J.	Unknown	Unknown

Intercept technology use cases

• Electronic circuit
Can be solved the problem of corrosion prevention and implementation process.



• Storage of injection molding machine screw



Packing cost comparison of anti-rust oil and static intercept

Example of the use of static intercept in Europe and the United States automobile manufacturers
By sea shipment of the cylinder block of the engine. (By sea shipment to the United States from Europe)

	Summery	Static intercept	Anti-rust oil + Anti-rust film
Number of pallets		18	18
The of Anti-rust oil coating process		0	4,050 yen
The cost of Anti-rust oil degreasing process		0	10,800 yen
The cost of Packing material		11,500 yen	5,400 yen
Other expenses (waste liquid, etc.)		2,000 yen	4,050 yen
Total cost of the pallet		13,500 yen	24,300 yen
Packing cost (per product)		750 yen	1,350 yen
Actual operation is used twice		375 yen	Incompatible

• Calculated as "1 euro = 135 yen"



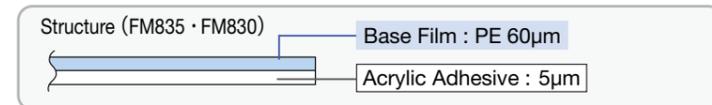
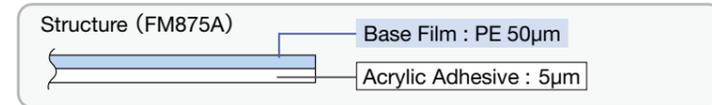
In one way shipment can also be making a cost reduction. (In term of total cost)

Wide range of applications in electronics industries such as semi-conductor, liquid crystal and printed circuit board.

PROCESTA PE

【Applications】

- ▶ Used for dummy printing for registering circuit board printing.
- ▶ Used for cleaning printing screen.



※ No liner is attached to this film.

Product No.	Adhesion
FM875A	↑ Weak
FM835	↕
FM830	↓ Super Weak



PROCESTA PI

【Applications】

- ▶ Connecting for CCL. (Connecting after cutting NG section)
- ▶ Connecting for Stainless carrier board.
- ▶ Settling for lead-frame, PCB, FPC, crystal oscillator etc.

【Features】

- ▶ Heat-Resistant label of Polyimide is used for heat process purpose.
- ▶ Plastic core is used for protecting particle.
- ▶ High quality Silicon adhesive is used.



※ No liner is attached to this film.



PROCESTA NT-F

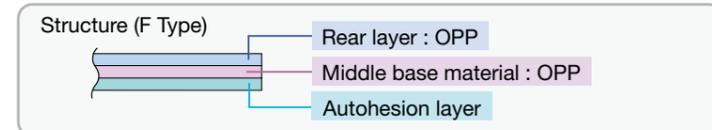
(Self-Adhesion Film without using adhesive)

【Applications】

- ▶ Used for dummy printing to register circuit board print.
- ▶ Used for conveyance of circuit board between factories.
- ▶ Used as carrier film.
- ▶ Used as spacer cushions.

【Features】

- ▶ Adhere to a flat surface made of various kinds of materials including copper leaf, glass, aluminum, and acryl.
- ▶ No residue of adhesive because adhesive is not used.
- ▶ The base film has anti-static characteristics so that less particles and dusts adhere to the film and prevents troubles caused by static electricity.
- ▶ No silicon is used for materials composed of the film.



Procesta Antistatic PP

【Applications】

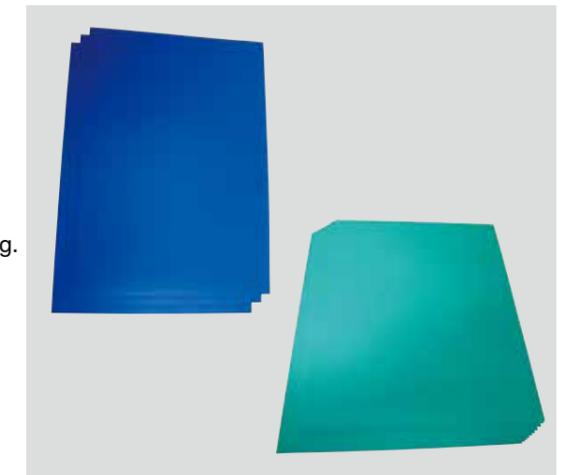
- ▶ Used for PCB manufacturing process as spacer.
- ▶ Used for SUS board as spacer.

【Features】

- ▶ Dirt does not adhere to because it has the antistatic performance lasting.
- ▶ It has excellent strength and durability because they can be made of polypropylene.

Thickness	Standard	Color	Surface resistivity
0.38mm	650mm×1,100mm	Blue Green Orange	1×10 ¹⁰ Ω
0.5mm	535mm×1,270mm	Green Light Blue	ditto

※ The above figures are measured values, not guaranteed values.
● I can also counterparts of special specification. (Sizes, Thickness & Colors)

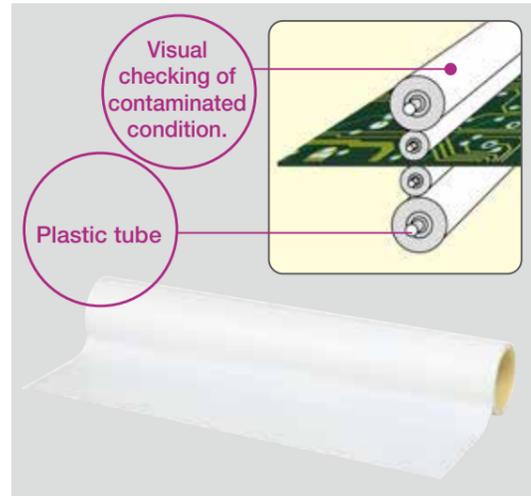


Ridged Clean (Adhesive cleaning tape)

【Features】

- ▶ Superior in dust removal.
The appropriate adhesiveness of RIGID CLEAN removes dust on resin/metal piece and dry resist film via silicone rubber roller.
- ▶ Visual checking of contaminated condition.
- ▶ White adhesive film is employed, so the contaminated condition can be visually checked and separating timing is not missed.
- ▶ No dusting due to plastic tube employed as a core.
- ▶ The specification of 20 or 25-m roll permits the mitigation of replacing work and improved workability.

Product No.	Size	I.D.	Rolls/case	Adhesion
RCR266	660mm × 15m	52mm	6	Weak
RCR360	600mm × 25m	3 inch	4	
RCR365	650mm × 25m			
RCRC1360	600mm × 25m			Standard
RCRC1365	650mm × 25m			

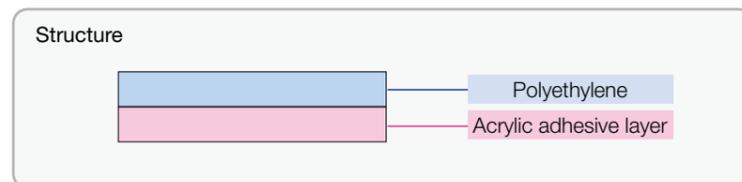


Ridged Clean PE

【Features】

- ▶ Cleaning tape of polyethylene base material.
- ▶ Dust at the time of the work is very low because it is plastic core using.

Product No.	Size	Unit	Packing
RCPE160	160mm×10m	1ctn	20rolls/box



Characteristic

Test Article	Unit	Measured value
Adhesion	N/25mm	2.4

The above figures are measured values, not guaranteed values.

Marking Label (Label to point out defects)

【Features】

- ▶ Labels to point out defects for later repairing during printed circuit board assembly and other manufacturing process.
- ▶ Various kind of label base materials are available for different stage of manufacturing process, and can be used for packaging preventive sensor.

Product	Color	Shape	Size
Standard Paper Label Wood Free Paper	Various Colors		5 × 15mm
Clean Paper STACLEAN Tack R	Blue (Material base color)		5 × 15mm
Heat-resistant Label Polyimide #25	White (Material base color)		4 × 5.5mm
Synthetic Label YUPO 80 PA-T1	White (Material base color)		φ 8

※ Above shapes are available for all of above products.

EC Cleaner (Adhesive Anti-static Rubber Roller)

【Features】

- ▶ Remove dusts and contamination without hurting objects because of the proper strength of adhesion and softness of roller.
- ▶ Rub and peel electrification can be reduced due to low charging on the surface of roller.
- ▶ No extracts like from silicone materials because synthetic rubber is used.

Product No.	Color	Adhesion
EC Cleaner V	Violet	Strong
EC Cleaner B	Blue	
EC Cleaner S	Grey	Weak
EC Cleaner O	Orange	
EC Cleaner P	Pink	
EC Cleaner C	Cream	

※ EC Cleaner S is bleed less type products that minimize extracts from the surface of roller.

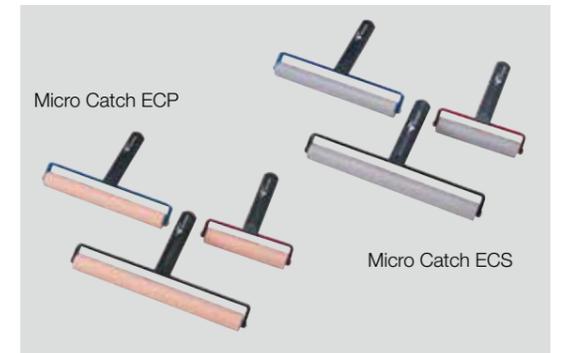


Micro Catch (Handy Cleaner Roller)

【Features】

- ▶ Handy type of EC Cleaner.
- ▶ Handle material is also conform to anti-static specification so that rub and peel electrification can be reduced.

Product No.	Color	Diameter	Width
Micro Catch ECS	Grey	30mm	150mm, 250mm, 310mm
Micro Catch ECP	Pink		



MC-PAD (Dust Transfer Adhesion Sheet for Micro Catch)

【Applications】

- ▶ Transfer dusts from Micro Catch.

【Material】

- ▶ PP sheet
- ▶ Adhesive: Acrylic

Size	Sheets/pad	Pads/case
330mm × 245mm	30	5



Products Related to Printed Circuit Board

Pylon PK Tape

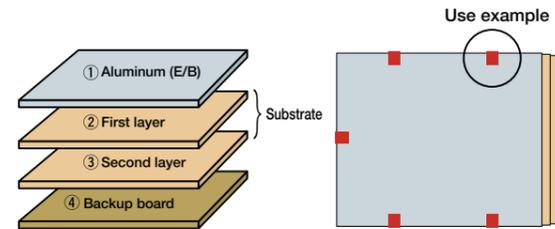
(Tape for making holes process of PCB)

【Features】

- ▶ Easy removal of tape
Special adhesive is used to remove the tape, so that this tape can be easily removed and the working time can be greatly saved.
- ▶ Prevention of tape breakage
Pylon PK Tape does not break by removing the tape from the face of a phenolic rein plate, thereby improving non-through holes due to residual tape piece.
- ▶ No adhesive residue
No adhesive trace is left on the phenolic resin plate, resulting in no adhesive transfer to the entry board or substrate.



Product No.	Size	Color	Pieces/case
PKT1250Y	12mm×50m	Yellow	200
PKT1550Y	15mm×50m		
PKT1250	12mm×50m	Red	
PKT1550	15mm×50m		

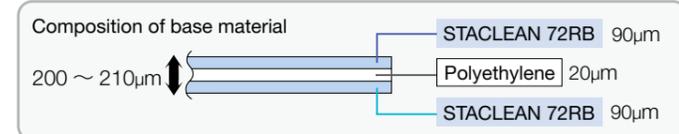


Spacer LCP-200 for Board Protection

(Spacer for manufacturing process of printed circuit board)

【Applications】

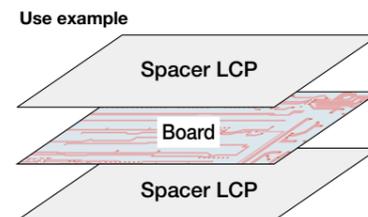
- ▶ Can be used as a spacer.
Spacer for inside-layer circuit, board protection after blackening process, and FPC circuit.
- ▶ Flaw prevention
To protect the surface of copper-clad laminate and the inside-layer circuit board of laminated circuit board.
- ▶ Can be used for transporting.
To transport FPC cut into sheets before laminating.



Electrostatic characteristics

Surface electric resistance (Ω)	Front	10 ¹⁰
	Back	10 ¹¹
Electrostatic half time (sec)	Negative charging	0.31
	Positive charging	0.23

※ The above figures are measured values, not guaranteed values.
※ Electrostatic half time.....Measuring of electrostatic half time after voltage 10kV is applied.



Corporate Profile

Current Status

Company Name:	Sakurai Co., Ltd.
Established:	September 15, 1899
Capital:	120million Yen
Products:	<ul style="list-style-type: none"> • Dustless paper products for clean room use such as PPC, notebooks, labels, computer forms and customized insertion paper. • Films for clean room use such as bar code labels and heat-resistant labels. • Other clean room supplies such as wiper, swab, shoes and gloves. • Films for industrial use such as diffusion film. • Paper and films for printing by full color ink jet printers and for application of outdoor sign & indoor display including customized wall paper. • Outdoor and indoor sign materials such as CAL for cutting plotter, laminate film and floor & window decoration materials. • LED for channel letter and other signage. • Drafting paper and film. • Paper and films for printing by CAD ink jet plotters and wide format copiers. • Wide format full color printer system. • CAD plotter system. • Cutting plotter system. • Products for sales promotion and gift.

History

September 1899:	Established as Sakurai Daijuro Store, "Star Business Card".
Year 1920:	Started manufacturing sensitizing paper.
Year 1922:	Imported a continuous high performance coater machine from Germany, and started mass production of sensitizing paper.
Year 1931:	Succeeded to manufacture diazo paper and started marketing under the brand name of Diado Diazo Paper.
Year 1935:	Received technology transfer from Grinten Co., Ltd in Holand, developed wet diazo paper and started manufacturing of Star Drafting Paper.
September 1949:	Re-established as Osaka Sakurai Co., Ltd.
April 1967:	Moved head office to Tokyo.
April 1969:	Changed company name to Sakurai Co., Ltd.
September 1970:	Started to sell film with adhesive product and participated in out-door signage market.
July 1976:	Sanyo Kokusaku Pulp Co., Ltd. (currently Nippon Paper Industries Co., Ltd.) became a major share holder of Sakurai Co., Ltd.
April 1982:	Started to sell Staclean (dust-free paper)
October 1983:	Started to sell materials for printing and plating
August 1999:	Established West Logistic Center
September 1999:	Celebrated 100th anniversary
October 1999:	Established East Logistic Center
July 2002:	Enacted an environmental policy
January 2003:	Obtained ISO14001 Certification (Head office)
August 2005:	Moved a head office to Ikenohata, Taito-ku, Tokyo