LINTEC Labelstocks

Effective Labels for Many Applications

Effective labels call for effective materials. As the demands made by design and manufacturing alter and expand the use of labels, Lintec stays ahead by ensuring our adhesive labelstocks meet a wide range of performance requirements.

Our range of facestocks, adhesives, and release papers/films use advanced technology and include innovative adhesives that ensure labelstocks perform reliably even in harsh conditions.

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LINTEC Labelstocks

Lintec's Global Network

The Lintec Group is expanding across Asia, Europe and North America as our global market continues to grow. Based on the "Made in Market" principle, we aim to produce high-quality products not only in Japan but also at sites close to our customers.

Europe

Netherlands
- LINTEC EUROPE B.V.

Hungary
- LINTEC EUROPE B.V. Hungary Office

Germany
- LINTEC ADVANCED TECHNOLOGIES (EUROPE)GMBH

Israel
- LINTEC ADVANCED TECHNOLOGIES (EUROPE) GMBH Israel Office

Asia

Japan
- LINTEC CORPORATION (Head Office)

China
- LINTEC (SUZHOU) TECH CORPORATION
  - Beijing Branch
  - Shanghai Branch
  - Shenzhen Branch
- LINTEC (TIANJIN) INDUSTRY CO., LTD.
- LINTEC PRINTING AND TECHNOLOGY (TIANJIN) CORPORATION
- LINTEC ADVANCED TECHNOLOGIES (SHANGHAI), INC.
  - Suzhou Branch
  - Tianjin Branch
  - Shenzhen Branch
  - Chengdu Branch
- MADICO, INC. Suzhou Office

Korea
- LINTEC KOREA, INC.
- LINTEC SPECIALITY FILMS (KOREA), INC.
- LINTEC ADVANCED TECHNOLOGIES (KOREA), INC.

Taiwan
- LINTEC SPECIALITY FILMS (TAIWAN), INC.
- LINTEC HI-TECH (TAIWAN), INC.
- LINTEC ADVANCED TECHNOLOGIES (TAIWAN), INC.
  - Hsinchu Office

India
- LINTEC INDIA PRIVATE LIMITED
  - Mumbai Branch

Thailand
- LINTEC (THAILAND) CO., LTD.
- LINTEC BKK PTE LIMITED

Malaysia
- LINTEC INDUSTRIES (MALAYSIA) SDN. BHD.
- LINTEC INDUSTRIES (SARAWAK) SDN. BHD.
- LINTEC KUALA LUMPUR SDN. BHD.
- LINTEC ADVANCED TECHNOLOGIES (MALAYSIA) SDN. BHD.
  - Kuala Lumpur Office
  - Penang Office

Singapore
- LINTEC ASIA PACIFIC REGIONAL HEADQUARTERS PRIVATE LIMITED
- LINTEC SINGAPORE PRIVATE LIMITED

Indonesia
- PT. LINTEC INDONESIA
- PT. LINTEC JAKARTA

Vietnam
- LINTEC VIETNAM CO., LTD.
- LINTEC HANOI VIETNAM CO., LTD.
- LINTEC CORPORATION Hanoi Office

Philippines
- LINTEC ADVANCED TECHNOLOGIES (PHILIPPINES), INC.
- LINTEC PHILIPPINES (PEZA), INC.

- Manufacturing subsidiary
- Sales subsidiary, Branch, Office
- R & D base
- Holding company, Regional headquarters

United States

United States

- LINTEC USA HOLDING, INC.
- MADICO, INC.
  - Madico Window Films
  - Madico West
  - Madico Southwest
  - Madico Mid-America
  - Madico South Texas
  - Madico Southeast
  - Madico Florida
  - Madico Northeast
- LINTEC OF AMERICA, INC.
  - Chicago Office
  - Dallas Office
  - Nano-Science & Technology Center


Tatsuno Plant (Hyogo Prefecture)


Chiba Plant (Chiba Prefecture)


Agatsuma Plant (Gunma Prefecture)


Research Center (Saitama Prefecture)


LINTEC (THAILAND) CO.,LTD.


PT. LINTEC INDONESIA


LINTEC (SUZHOU) TECH CORPORATION


LINTEC (TIANJIN) INDUSTRY CO., LTD.

Technology

The right label for the job

To produce labels that best fit your requirements we work with you to agree the required properties and then produce labelstock that best meet these specific needs.

Checklist for selecting the right labelstock

Check Point 1

What material will it be adhered to, and what is the surface like?

- ☐ Metal
- ☑ Plastic
- ☐ Rough
- ☑ Smooth
- ⋮

Check Point 2

What kind of environment and location?

- ☑ High temperature
- ☐ Low temperature
- ☐ Wet surface
- ☐ Indoor
- ☐ Outdoor
- ⋮

Check Point 3

What adhesive type do you require?

- ☑ Permanent
- ☐ Removable
- ☐ Re-applicable

Check Point 4

How will you apply the labelstock?

- [x] By hand
- [ ] Using a labeling machine

Check Point 5

Any regulations that need to be considered?

- [x] REACH regulations
- [x] RoHS directive
- [x] UL/CUL standards

⋮

Check Point 6

Any other requirements?

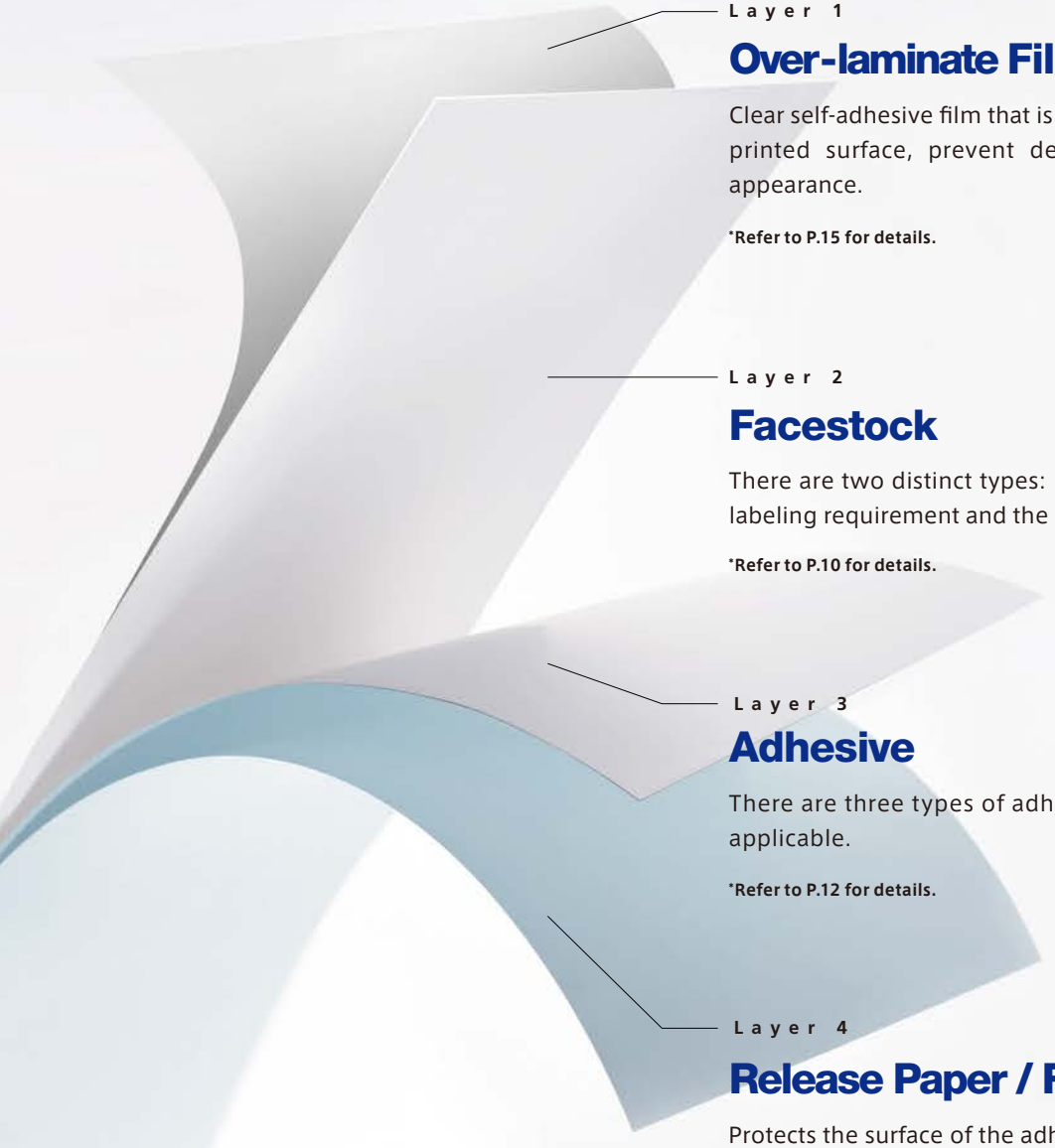
- [x] Size
- [x] Shape
- [x] Printing methods

⋮

We make customized label upon requirements!

Label Construction and Adhesive Coating Technologies

Labelstocks consist of three layers: facestock, adhesive, and release paper or film. In some cases an over-laminating film may also be applied over the facestock.



Layer 1

Over-laminate Film

Clear self-adhesive film that is applied over the facestock to protect the printed surface, prevent decoloration, and provide a decorative appearance.

*Refer to P.15 for details.

Layer 2

Facestock

There are two distinct types: paper or film. Selection depends on the labeling requirement and the environment in which it will be used.

*Refer to P.10 for details.

Layer 3

Adhesive

There are three types of adhesives: permanent, removable, and re-applicable.

*Refer to P.12 for details.

Layer 4

Release Paper / Film

Protects the surface of the adhesive and is also used as the supporting layer when manufacturing and processing labels.

*Refer to p.14 for details.

About the product name

The product name for customised labelstocks is created according to the labelstock structure, as follows:

PET 50(A) — Facestock
PAT1 — Adhesive
8LK — Release paper/film

Lintec's Labelstock Manufacturing Process

Phase 1 Material selection

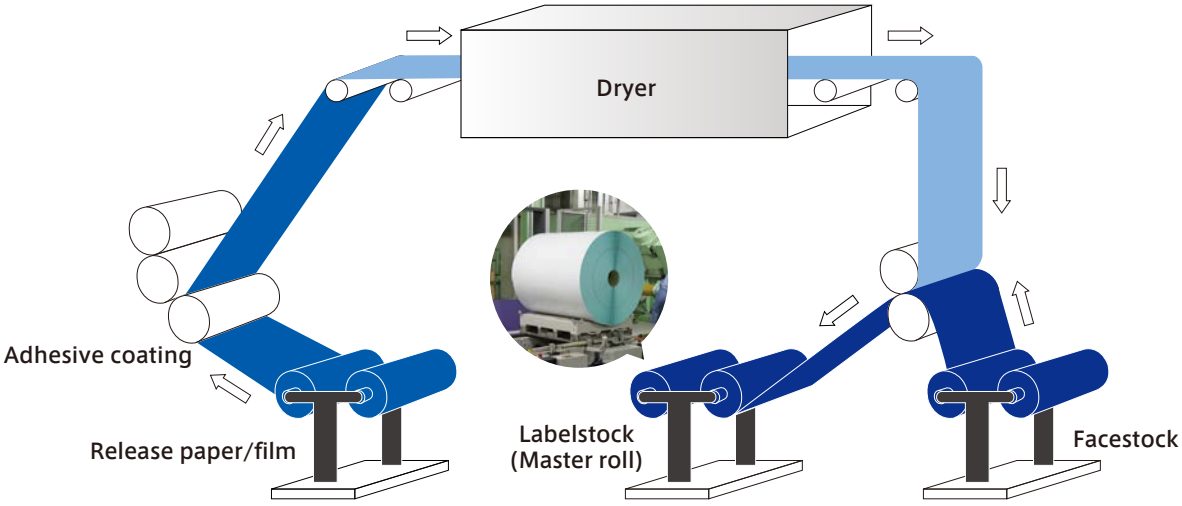
Choose the right material for the job

Various materials are tested, and an optimized combination is selected.

Phase 2 Adhesive coating

Lintec's adhesive coating technologies

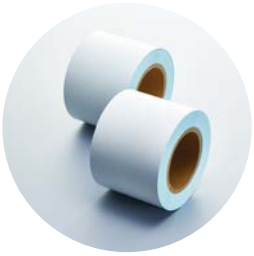
Generally, the release paper/film is unwound and the adhesive is coated at a high precision and consistent thickness using our original technology. After passing through the dryer, the film or paper is laminated over the adhesive layer, and the labelstock is wound into a master-roll.



Phase 3 Slitting and shipping

Slitting according to the customer's specifications

After coating the adhesive and winding into a master roll, the labelstock is slit into smaller rolls or sheets (according to the customer's specifications), and then shipped.


Rolls


Sheets

Printing and converting at the label printing company

Delivered to the customer

Facestocks

Layer 2
Facestock

The materials used as facestock are paper or film. It is important to select a facestock that meets the specifications imposed by the intended use and design of the labelstock - these may include color, appearance, touch, heat resistance, and water resistance. We offer a variety of facestock including surface-treated materials, non-woven fabric, woven fabric, and aluminium foil.

Paper Materials

Facestock suitable for printing and creative design

Paper is cost effective and especially suitable for printing and writing on; it lends itself to a wide variety of labeling applications including logistic uses.

Wood-free paper

55 70 90

This widely used option uses pulp as the primary raw material. Suitable for numerous applications including printing, writing, and stamping.

Semi-gloss/semi-matt coated paper

Matt Semi-gloss Semi-matt

Wood-free paper that has been coated for whitening. Ideal for labels with a luxurious touch.

Gloss paper

Gloss

Top-coated glossy wood-free paper. The combined whiteness and high sheen are a good choice for labels for high end products.

Metallic paper

Silver gloss Silver matt Gold gloss Gold matt

Made by laminating aluminium foil with paper. Used to produce eyecatching labelstock for example for gift packaging.

Colored paper

Colored wood-free paper Fluorescent paper

Available in a range of color and fluorescent types.

Specialty paper

Impregnated paper Kraft paper Dust-free paper Crepe paper
Washi (traditional Japanese paper) Unryushi (traditional Japanese art paper)

Paper for various special functions or with particular characteristics such as color variety and texture.

Variable information printing paper

Thermal transfer types Direct thermal types
Inkjet types Laser printer types

Suitable for a wide range of applications such as logistic, bar-code printing and high resolution printing.

Film Materials

Durable labelstocks designed to withstand outdoor conditions

Film offers certain properties that are not achievable with paper, such as resistance to heat, chemicals, or outdoor conditions.

Polyester (PET) film

Clear White Metalized Hairline

Offering excellent mechanical strength, heat resistance and smoothness. In addition to white and transparent, there are matt, metalized, and hairline texture finish types available.

Vinyl chloride (PVC) film

PVC

This is characterised by excellent outdoor durability, and minute color deterioration under exposure to sunlight.

Synthetic paper

PP-base

Combines paper-like and plastic-like properties and is highly suitable for variable-printing and writing, amongst other applications.

Polypropylene (PP) film

Clear White Metalized

PP film has excellent water resistance and transparency. In addition to white and transparent types, there are matt and metalized types.

Polyethylene (PE) film

Clear White

PE film is easy to mold to shape. Its properties include water resistance, and the ability to adhere to curved surfaces. Available in both white and clear types.

Polystyrene (PS) film

Clear White

PS film has excellent shaping properties and lends itself to a wide variety of applications. Labels using PS that are applied to products made from PS ('same surface material') do not have to be removed before recycling of the product.

ABS (Acrylonitrile-butadiene-styrene) film

Clear White

ABS is durable and highly heat-resistant, making it a popular choice for electrical product labeling. Labels using ABS that are applied to products made from ABS ('same surface material') do not have to be removed before recyling of the product.

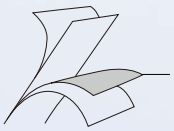
Variable information printing films

Thermal transfer type Direct thermal type

Laser printer type Inkjet type

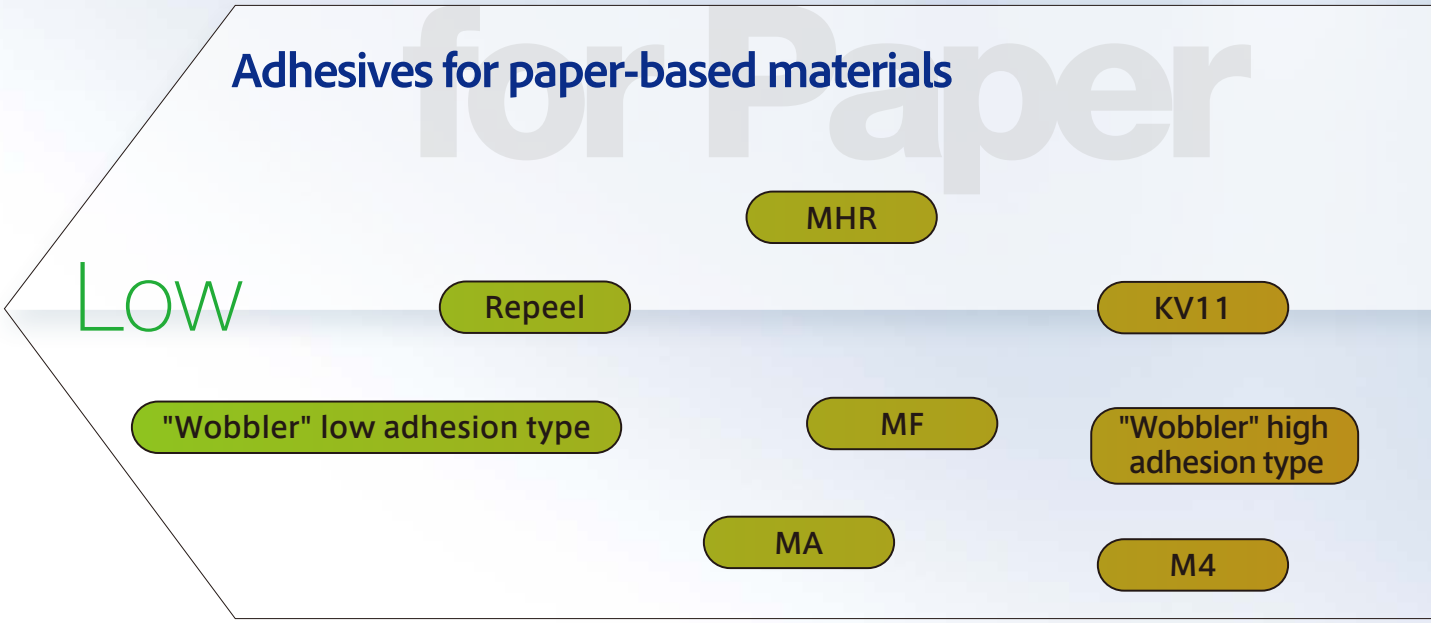
Variable information printing film can be used for a range of applications such as logistics, bar-code printing and high resolution printing.

Adhesives



The basic components of adhesives are acrylic, rubber and silicone.
The choice of adhesive type will depend on the application and also whether the labelstocks are to be permanent, removable, or re-applicable.

Distribution chart for adhesive strength



Adhesive for paper-based materials

Main adhesives and their characteristics

Type		Adhesive	Characteristics
Permanent		Adhesive for rough surface	Suitable for applying to rough surfaces
		PM3	Very high adhesion. Suitable for adhesion at low temperature and to rough surfaces
		PZ2	Very high adhesion
		PC	Can be applied to frozen food packaging or surfaces made wet by condensation
		SG	High adhesion for general use. Good adhesion to polyolefin
		Correction (I-2 tack)	For corrections, masking use
		PW	High adhesion for general use
Removable type	Low adhesion removable type	MHR	Removable for general use. Suitable for logistics, barcodes, and for general labels
Re-applicable type		Repeel*	For sticky notes and decorative labels

*Repeel is also available for film-based materials

Adhesive types

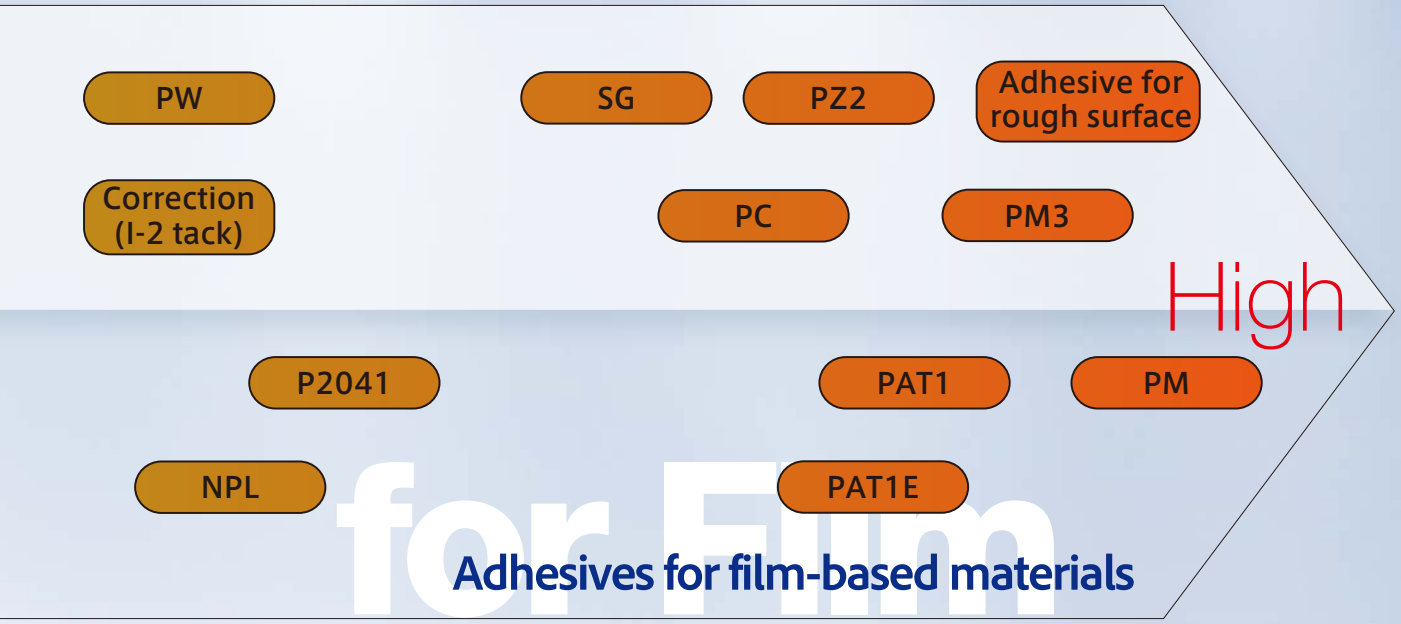
Permanent type High adhesion. Suitable for applications in which the labels remain affixed for a long time.

Removable type Suitable for applications in which the labels are removed after a period of time.

High Low Very low

*Adhesives are selected with consideration to factors such as the application method, material substrate, application surface and environmental conditions.

Re-applicable type Suitable for applications in which the labels are removed after a period of time, and then reapplied.



*The material and shape of the application surface can affect adhesion and removability, labels should therefore be tested before use.

Adhesive for film-based materials

Main adhesives and their characteristics

Type		Adhesive	Characteristics
Permanent		PM	Very high adhesion. Suitable for adhesion at low temperature and to rough surfaces
		PAT1	High adhesion for general use
		PAT1E	High adhesion for general use. Emulsion type
		P2041	Specialized for adhesion to same-surface material labelstocks
		NPL	Highly transparent, for over-laminate use
Removable	High adhesion	"Wobbler" High adhesion type	For POP and eye-catching labels
		M4	Office equipment, electronic devices, general, POP labels
		KV11*	For promotions, numbering tags and ID tags
	Low adhesion	MF	Removable for general use
		MA	For position readjustment
	Very low tack adhesion	"Wobbler" Low adhesion type	Silicone adhesive. For POP or decorative labels

*KV11 is also available for paper-based materials.

Release Papers/Films

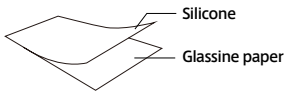
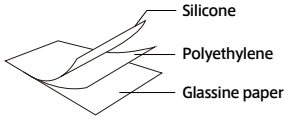
Layer 4
Release paper
/film

**Paper or film coated with a release agent is known as "release paper" or "release film".
It is used to protect the adhesive surface,
and also functions as a liner during the label manufacturing process.**

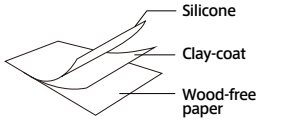
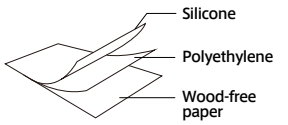
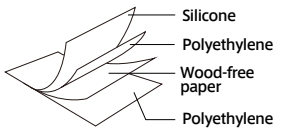
Types and Characterstics

**Lintec carries out the full manufacturing process,
from pulping to production of release paper/film.
A range of release properties are available.**

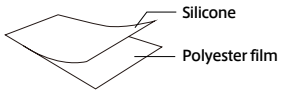
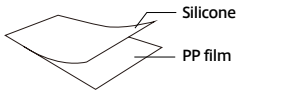
Glassine paper (rolls)

Construction	Product name	Color	Characteristics
	8K	Blue	For general use Repulpable
	7LK	White	For over -laminates
	8LK	Blue	For general use

Wood-free paper (sheet-fed)

Construction	Product name	Color	Characteristics
	8R	Ivory	For general use Repulpable
	8E	Ivory	For general use
	11LL	Blue	Good dimensional stability
	11BL	Ivory	Good dimensional stability

Film

Construction	Product name	Color	Characteristics
	PET38	Clear	Highly transparent, smooth adhesive surface
	PP40	Clear	Highly transparent, smooth adhesive surface

Over-laminate Films

Layer 1
Over-laminate film

Over-lamination is the process of applying a transparent film to the printed surface of labels. This process has several functions including water resistance and protection of the printed surface; it also offers design-related benefits in that it forms a glossy or matt finish.

Protection of the printed surface

Over-lamination of the label protects the print from deterioration due to UV light and abrasion. This maintains the label's high-quality appearance.

With over-lamination　　Without over-lamination

Preventing color loss due to UV light

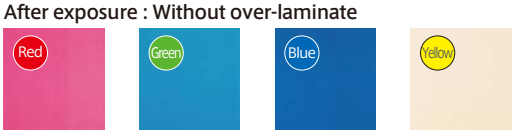
Lintec offers a series of over-laminating products including types which cut damaging UV light. These are mostly for outdoor use, and the labels remain fixed for long periods without color loss.

Outdoor UV exposure test

Control

After exposure : Over-laminate(Suncut NPL 7LK)

After exposure : Without over-laminate



*Test condition: Fade meter, after 300 hours exposure.
*This test result is intended for information only, and does not constitute a guarantee or warranty of product performance.

Ability to overprint after over-lamination

Applying a top coating to the over-laminate film makes it possible to print bar-codes clearly with high durability.

Abrasion test

Over-laminate film	Before abrasion	After abrasion
Printable over-laminate film (FR1225-16)		
Ordinary over-laminate film		

*Test condition:Lintec original test for abrasion.
*This test result is intended for information only and does not constitute a guarantee or warranty of product performance.

UL/CUL certified products

Lintec offers a series of products that are certified by UL/CUL standards. These are suitable for import and export products (refer to p. 28 for details).

UL recognized mark　　CUL recognized mark

Case Study

Lintec's Labelstock Solutions

Difficult challenges lead to innovative thinking
Lintec has made significant progress by listening to
customers' needs and developing products
to meet their requirements.
Here we provide a few examples of our intelligent solutions.

1 **For Everyday Use**	General labels and sealing labels
2 **For Food and Beverages**	General labels and promotion labels
3 **For Stationery**	General labels, sticky notes, and stickers
4 **For Industrial Use**	Nameplates, warning labels, and tire labels
5 **For Medical and Pharmaceutical**	Ampule labels and syringe labels
6 **For Logistics**	Shipping labels and plastic container labels

For Everyday Use

General labels and sealing labels

Enhances product appearance

Packaging labels should reflect the image and quality of the product. A label that peels off or wrinkles when the container it is applied to is squeezed undermines the brand's image. When labeling cylindrical containers in particular, it is important to select an appropriate facestock and adhesive to ensure they stick firmly onto the curved surface.

2 For Food and Beverages

General labels and promotional labels

Firmly attaches in wet or cold conditions

Food product labels require different properties depending on the application. For example, labels for spirit and wine bottles must be water resistant so that they do not peel off or wrinkle when wet. Promotional labels on cans must adhere firmly in hot and cold conditions, and may need to be cleanly removed. Rough surfaces call for adhesives that can cope with uneven textures.

Water-resistance

Does not peel off even when soaked in ice water

Temperature tolerance

Cleanly removable in high or low temperatures

For rough surfaces

Superior adhesion to heavily textured surfaces

3 For Stationery

General labels, sticky notes, and stickers

Reliable adhesion to curved surfaces

Our leading technology for display labels for ballpoint pens uses a flexible labelstock that attaches firmly onto narrow cylindrical surfaces. We also offer a series of labels for stationery such as sticky notes that can be peeled off and attached repeatedly, and stickers with cartoon characters and other designs.

Conformability

Adhesion even on narrow cylindrical surfaces

Re-applicable

Can be peeled off and attached repeatedly

Decorative Design

Can be used for creative applications

For Industrial Use

Nameplates, warning labels, and tire labels

Durable for long-term use in harsh conditions

Nameplate labels that indicate product models, instructions or warnings must be resistant to high temperatures and/or against various types of solvent. Long-term durability is also essential. We have a series of products that meet these performance properties and conform to UL/CUL standards. We also supply many label materials for automobile applications, which have very rigorous specifications.

*Refer to p. 28 for details about UL/CUL standards.

5

For Medical and Pharmaceutical

Ampule labels and syringe labels

Strong adhesion, no peel off

Labels used in the medical and pharmaceutical field carry critical information and are exposed to extremes of environment. Adhesion at low temperature and/or transparency are essential for identification and, for safety reasons, labels must not be at risk of peeling off accidentally. Labels used in these environments must also be able to withstand sterilisation processes. For this reason, strong and resilient adhesive materials are used.

Low temperature conditions

Suitable for storage in freezers

Transparency

Content can be checked through the label

Sterilisation

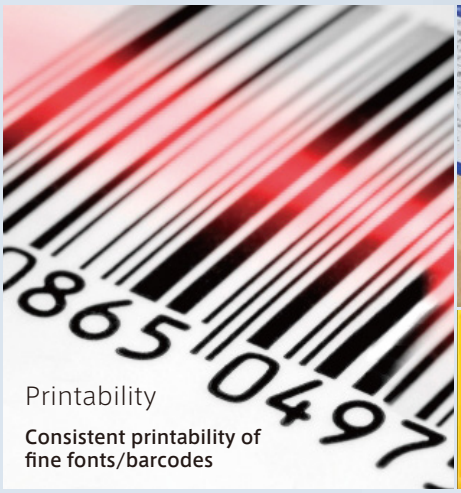
Resistant to high-temperature sterilisation processes

For Logistics

Shipping labels and plastic container labels

Reliable printability even when using fine fonts

Shipping labels and delivery slips attached to cardboard packaging call for clear printability of bar codes and adequate adhesion to ensure they do not peel off during delivery. They may also need good abrasion resistance and ability to overprint. Adhesive labels for plastic food containers may need to enable easy removal by washing with warm water.



Machinery Solutions

Overall Solutions of Materials and Equipment

In addition to our wide range of label materials, we also provide printing presses and labeling machines that help optimize the performance of the label materials. With our thorough understanding of label properties, we can offer support throughout the label manufacturing process.

Label printing press

A high-performance intermittent rotary letterpress, the LPM-300iT has a shaftless construction that powers each roller independently. It is equipped (as standard) with a unit-rotating device to maintain high registration. It offers a range of options to meet various needs, including continuous-supply devices with EPC, and stabilising devices that maintain color-consistency and reduce printing losses.

Labeling machines with printing unit

This machine has been developed through Lintec's unique understanding of labels, and thoroughly tested for ease of operation and maintenance. It enables fast and reliable label production and application - even in harsh environments like manufacturing plants and distribution centres. There is an optional cover that encloses the labelstocks and print-head section to protect them from dust.

Labeling machines

A high-performance labeling machine, equipped with the best unit design in the industry and able to perform all functions required by the label specification. The series includes certain optional functions, such as seven types of labeling units and two types of printing units (300 and 600 dpi) to meet the demands for ultra-fine and high-speed barcode label printing.

Barcode printers

For various applications with barcodes, two-dimensional symbols, etc., these printers are used world-wide in various fields, including medical & pharmaceutical, and logistics. Manufactured by Zebra Technologies Corporation in the USA, a range of models is available, from high-performance to portable.

Highlight Products

Lintec's Distinctive Labelstocks

Lintec is extensively involved in research and development of new materials including those for sustainable products, information security, and gas-permeable material.
Take a look at some of the unique features of our products.

Highlight 1

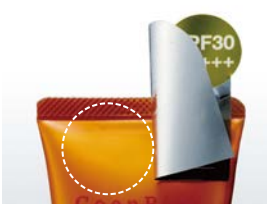
Cleanly Removable Labelstocks

Removable feature enables various applications

These labels attach firmly to various plastic containers but can be removed when required, leaving very little residue. Available in 2 types, choose from high adhesion type - ideal for eyecatching labels, and the very weak adhesion type, for example for applying posters to glass surfaces.

Removability test [High adhesion type]

Conventional : Residue observed



Labels that peel off cleanly

Applications of very weak adhesion type


For posters on windows at stores

Promotional labels on refrigeration cabinets

Highlight 2

Labelstocks Made of the Same Material as the Application Surface

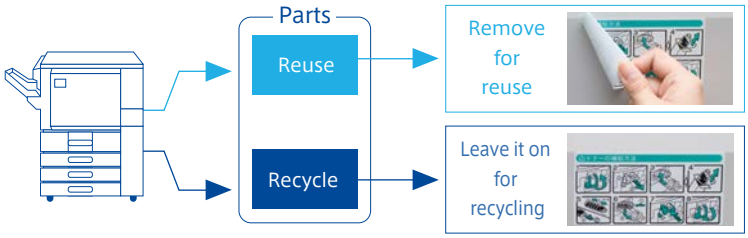
Removable labels for reuse / recycle application

Labelstock composed of the same material as the molded plastic used for electronics such as air-conditioners and copying machines. By using removable type adhesive, the labelstock is suitable for reuse or recycling.

Reuse/recycle of copying machines

Applications

- Office equipment such as copying machines and laser printers
- Electronics such as televisions and air-conditioners



Highlight 3

Environmentally Friendly Labelstock Using Recycled PET Resin

High quality, hygienic recycled PET resins obtained by mechanical recycling*

Labelstock using recycled PET film made from PET bottles utilizing the "mechanical recycling" method.

*Mechanical Recycling··· uses previously used PET bottles as raw material to produce high quality, hygienic recycled PET resin.

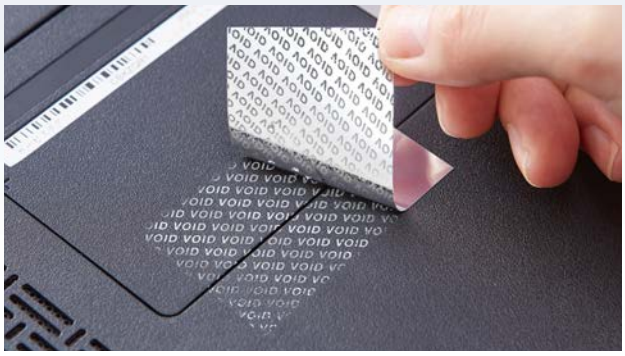
To produce recycled PET labels

Highlight 4

Tamper-Evident Labelstocks

Security label that identifies any attempt to remove it

There are two ways of making labels tamper-evident. One is by generating a word such as "VOID" on the facestock and the applied surface if someone attempts to peel off the label. The other is by using easily breakable facestock, making it difficult to remove. Applying these labels to valuable items helps prevent theft or replacement of the item's label.



Security feature with good converting capability

This white labelstock uses a special polypropylene film as its facestock. This maintains its appearance during the converting process but is easily and visibly damaged by removal.

Highlight 5

Labelstocks for Making Corrections

Hide old or incorrect information with a special treatment that prohibits viewers from seeing through the new label

These labels are suitable for correcting printed information such as price, shelf labels and addresses. Choose from different types of adhesives, depending on use and other specifications, from permanent type to removable type.

Series of labelstocks for making corrections

Correction labels

Highly concealing adhesive label that can be applied on top of the original label, container or packaging to make corrections.

Pre-correction labels

A label with pre-revision information temporarily covering information that is scheduled to be updated. When the scheduled date arrives, the revision can be made by just peeling off the label.

Tamper-evident labels

Similar to "pre-correction" labels, but cannot be reapplied once removed, thus prevents tampering.

Highlight 6

Labelstocks for Variable-Information Printing

Labels that adapt to customers demands

This labelstock enables the user to print variable information as required, following selection of the right material according to the application specifications. These variable printing labelstocks can be used with a wide variety of printers and are suited to a range of applications such as logistics, and medical & pharmaceutical.

Inkjet printing

Noted for superior image quality, reproduction and crispness, in full color as well as monochrome.

Direct thermal printing

Providing excellent printability and sensitivity. Suitable for diverse applications include POS labels, logistics labels, and process control labels.

Laser printing

Offering excellent image reproduction, toner fixing, electrical properties, smoothness, and flexibility.

Thermal transfer printing

Offering excellent adhesion for ink ribbons due to its smooth facestock and elasticity. Ideal for logistic and nameplate labels.

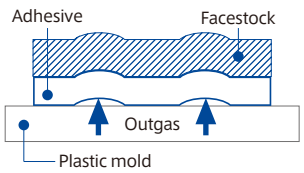
Highlight 7

Labelstocks with High Gas-Permeability

Self-adhesive film that overcomes problems with labels lifting and blistering

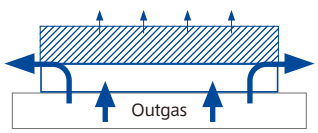
After application, general labels sometimes lift or blister because of the outgas released from the plastic. However, the high gas-permeability of the film and adhesive of this labelstock solve this problem of bubbling without impacting the design. Gas diffuses through the film and also from the sides of the label.

Conventional Labels



Lifting and blistering

Labelstock with high gas-permeability



No lifting or blistering

UL/CUL Standards

UL is the safety standard published by Underwriters Laboratories, Inc. which has the highest authority for safety assurance in USA. CUL is the safety standard for Canada which UL evaluates based on the standards that are published by CSA. Lintec has a wide range of UL/CUL certified media for general labels and for variable-information printing, in combination with various ink ribbons.

Recognition marks

(These symbols indicate that the parts and the materials are UL/CUL certified)

UL recognized mark

CUL recognized mark

Both UL and CUL recognized mark

Marking and labeling systems (UL969): UL recognition obtained by Lintec

＜Categories of UL969 standard＞

This standard is applicable to labelstocks used for nameplates and markers that carry important information such as instructions, explanations, and identifications. This standard has the following categories:

① **PGGU2/PGGU8 (labelstocks)** : **Label material for printing and for overlamination.**
② **PGDQ2/PGDQ8 (labels)** : **Labels that cannot have additional printing applied by the end-user.**
③ **PGJI2/PGJI8 (labels for printing)** : **Labels that can have additional printing applied by the end-user by using thermal transfer ribbons or lasers, etc.**

Lintec has recognition of ① and ③.

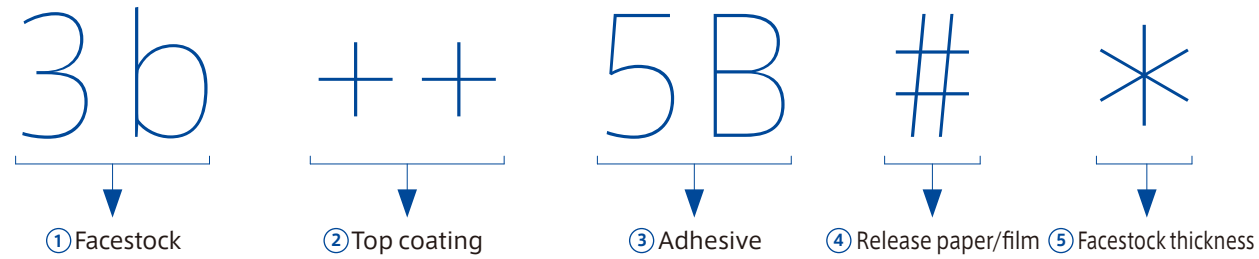
Lintec's UL/CUL certified categories

UL969 standard		UL standard	CUL standard	File No.
Certified category	Labelstocks	PGGU2	PGGU8	MH14023
	Labels for printing	PGJI2	PGJI8	MH18338

How to read the basic catalog No.

The catalog No. includes several suffixes, and they are substituted by numbers or characters.

Example; The basic catalog No. of "PET50(A) PAT1 8LK" is as follow:



① Facestock	PET	→	37
② Top coating	(A)	→	5
③ Adhesive	PAT1	→	5B
④ Release paper/film	8LK	→	Z
⑤ Facestock thickness	50μm	→	50

This gives

3755BZ50

*Contact Lintec for the catalog No. for each product.

Representative LINTEC Products with UL/CUL Certification

Polyester (PET) film based materials

Types of facestock	Adhesives	Facestock thickness (μm)	Basic catalog No.
FNS bright (B), TE bright (B), HLS bright (B)	PAT1,PAT1E	25～250	a3++5B#＊＊
FNS matt (M), TE matt (M), HLS matt (M)	PAT1,PAT1E	25～250	a4++5B#＊＊
FNG bright (B), HLG bright (B)	PAT1,PAT1E	25～250	a5++5B#＊＊
White Matt PET G23(k), K24(k)	PAT1,PAT1E	25～100	4815B#＊
White Gloss PET, K17(k)			4825B#＊
PET (clear, matt)	NPL	25～100	3b++5A#＊
	PAT1,PAT1E	25～100	3b++5B#＊
PETWH	PAT1,PAT1E	38～100	46++5B#＊
	M4	38～100	46++5F#＊
	PA10	38～100	4615C#(i)

Synthetic paper based materials

Types of facestock	Adhesives	Facestock thickness (μm)	Basic catalog No.
Yupo UV, Yupo SG, Yupo VES	PAT1,PAT1E	80～110	70+5B#d
Yupo UV	M4	80～110	7015F#d

Same surface material labelstock series

Type of series	Adhesives	Facestock thickness (μm)	Basic catalog No.
KES(polystyrene based)	PAT1,PAT1E	65	8015B#65
	P2041	65～120	8135D#(m)
	MR11	120	8135M#120
KEA(ABS based)	PAT1,PAT1E	65～100	ABS5B#(y)
	P2041	100	ABS5D#100
	MR11	100	ABS5M#100 *Only UL-certified

Over-laminate materials

Types of facestock	Adhesives	Facestock thickness (μm)	Basic catalog No.
PET (semi-matt)	NPL	25	3405A#25
PET (clear, matt)		16～75	3b++5A#c
PP (clear, matt) *Only in combination with Yupo materials		20～60	6105A#e
KES25N matt *Only in combination with KES materials		25	8125A#25
KEA30N matt *Only in combination with KEA materials		30	ABS5A#30

Details of UL Recognition
(Approved Surfaces and Temperature Ranges)

Types of facestock		Surfaces	Metals				Painted Metals		
			Galvanized steel	Aluminium*1	Stainless steel	Nickel-plated steel	Melamine paint	Acrylic paint	Epoxy paint
Polyester (PET) film based materials	FNS Bright(B), FNS Matt(M), TE, HL	PAT1, PAT1E	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	80℃ ~ -40℃
	White PET G23(k)・K24(k)・K17(k)	PAT1, PAT1E	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	80℃ ~ -40℃
	PET (clear, matt)	NPL	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	80℃ ~ -40℃
		PAT1, PAT1E	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	80℃ ~ -40℃
	PETWH	PAT1, PAT1E	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	80℃ ~ -40℃
		M4		Indoor 100℃ ~ -40℃	Indoor 100℃ ~ -40℃	Indoor 80℃ ~ -40℃*2			Indoor 100℃ ~ -40℃
		PA10		Indoor 100℃ ~ -40℃	Indoor 100℃ ~ -40℃	Indoor 100℃ ~ -40℃			Indoor 100℃ ~ -40℃
Synthetic paper based materials	Yupo UV, Yupo SG, Yupo VES	PAT1, PAT1E	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	100℃ ~ -40℃	80℃ ~ -40℃
	Yupo UV	M4		Indoor 100℃ ~ -40℃	Indoor 100℃ ~ -40℃				Indoor 100℃ ~ -40℃
Same surface material labelstock series	KES	PAT1, PAT1E		Indoor 60℃ ~ -40℃	Indoor 60℃ ~ -40℃	Indoor 60℃ ~ -40℃			
		P2041		60℃ ~ -40℃					
		MR11		60℃ ~ -40℃					
	KEA	PAT1, PAT1E		Indoor 80℃ ~ -40℃	Indoor 80℃ ~ -40℃				
		P2041		Indoor 80℃ ~ -40℃					
		MR11		Indoor 60℃ ~ -40℃					

100℃ ~ -40℃ | 80℃ ~ -40℃ | 60℃ ~ -40℃ | 60℃ ~0℃

*1 Aluminium includes die-cast aluminium and anodized aluminium

*2 Approved only with 25 or 50 μm thick facestock

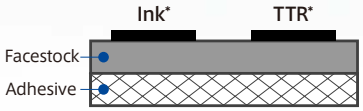
*3 Certified only with blended surface using PS or ABS

- **Materials suitable for application to two or more plastic surfaces are considered suitable for blends of those plastics, with Conditions of Acceptability common to the individual components in the blend.**
- **Ask Lintec for detail information about the certified inks and ribbons, and the detailed certification conditions.**
- **This does not constitute a guarantee or warranty of product performance. Customers must undertake thorough testing prior to usage.**

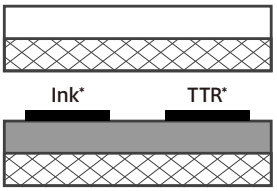
Plastics								
Epoxy	Phenolic	PPOX	PP	PS	PC	PVC	ABS	UP
80℃ ~ -40℃	80℃ ~ -40℃	80℃ ~ -40℃	Indoor 60℃ ~ 0℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃
80℃ ~ -40℃	80℃ ~ -40℃	80℃ ~ -40℃	60℃ ~ -29℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃
80℃ ~ -40℃	80℃ ~ -40℃	80℃ ~ -40℃	Indoor 60℃ ~ 0℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃	Indoor 60℃ ~ -40℃
80℃ ~ -40℃	80℃ ~ -40℃	80℃ ~ -40℃	Indoor 60℃ ~ 0℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃
80℃ ~ -40℃	80℃ ~ -40℃	80℃ ~ -40℃	Indoor 60℃ ~ 0℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃
		Indoor 80℃ ~ -40℃		Indoor 80℃ ~ -40℃	Indoor 80℃ ~ -40℃		Indoor 80℃ ~ -40℃	
80℃ ~ -40℃	60℃ ~ -40℃	80℃ ~ -40℃	Indoor 60℃ ~ 0℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃	60℃ ~ -40℃
		Indoor 80℃ ~ -40℃		Indoor 60℃ ~ -40℃	Indoor 60℃ ~ -40℃		Indoor 60℃ ~ -40℃	
		Indoor 60℃ ~ -40℃		Indoor 60℃ ~ -40℃	Indoor 40℃ ~ -40℃		Indoor 60℃ ~ -40℃	
		60℃ ~ -40℃		60℃ ~ -40℃	60℃ ~ -40℃		60℃ ~ -40℃	
		60℃ ~ -40℃		60℃ ~ -40℃	60℃ ~ -40℃[*3]		60℃ ~ -40℃	
		Indoor 80℃ ~ -40℃		Indoor 60℃ ~ -40℃	Indoor 60℃ ~ -40℃		Indoor 60℃ ~ -40℃	
		Indoor 80℃ ~ -40℃		Indoor 60℃ ~ -40℃	Indoor 60℃ ~ -40℃		Indoor 60℃ ~ -40℃	
		Indoor 60℃ ~ -40℃		Indoor 60℃ ~ -40℃	Indoor 60℃ ~ -40℃		Indoor 60℃ ~ -40℃	

Approved construction for printed label

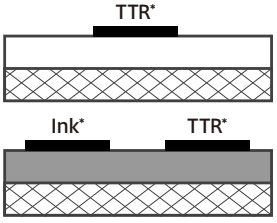
1. Without over-lamination



2. With over-lamination



3. Printing on top of over-lamination film



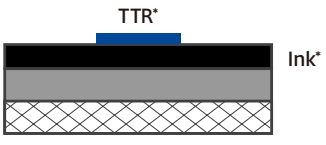
*Ink: Conventional printing ink

*TTR: Thermal Transfer Ink

Unapproved construction

*The following construction has not been approved.

● Printing over inks*



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*The contents of this catalog may be revised without prior notice.

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