# Security Labelling Solutions

Labels + Packaging
Innovations Guide
Europe
2021

**AVERY DENNISON**

# Solutions for better brand protection in an increasingly counterfeit world

With more people shopping online and more counterfeit goods being trafficked through e-commerce channels, brand protection is more important than ever. The global economic value of counterfeiting and piracy is expected to reach US$ 2.3 trillion by 2022.[1] Adopting the right security labeling solutions is essential for brands that want to protect their business, their customers and their revenue.

Counterfeiting affects virtually all market segments, including pharmaceutical, health, automotive, electronics, food & beverage, and beauty, among many others. Counterfeit products are not subject to the same quality control or governmental regulations as legitimate products, putting the health and safety of consumers at risk along with brand reputations.

For converters specializing in the production of security labels, the opportunity has never been greater—and Avery Dennison can help. Our comprehensive range of solutions delivers the latest innovations for protecting products and brands. From security features that are visible to the eye (overt) to those that are invisible (forensic), our product range offers the flexibility to build customised products with multiple security layers. In addition, our wide selection of transfer tapes, gum twins, and uncoated security face materials can help keep you ahead of counterfeiters by building and customizing label constructions on site while providing your customers with secure, fast, service. With our global scale, expert technical teams, and record of innovation, we're here to support you in making security label solutions a thriving line of business.

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# The dark art of counterfeiting takes many forms: product imitations, diversion of genuine products, tampering and reuse of original packages, and even volume substitution and dilution of consumables. Few industries are immune.

Here's how counterfeiting is affecting some of the largest segments of the world economy.

## Pharmaceutical

Drug counterfeiting is a major global problem. The manipulation or substitution of medications compromises patient safety, and can cost drug companies sales, revenue, and their brand image.

Interpol, Europol and national medicines agencies seize many falsified medicines and close hundreds of illegal websites every year. A report published by Europol's Intellectual Property Office (EUIPO) in 2019 estimates that counterfeit medicines cost the EU pharmaceutical sector more than 10 billion euros ($11.3 bn) annually in lost revenue.[2]

To harmonise safety features across the European Union, the EU implemented Falsified Medicine Directive 2011/62/EU, which, among other mandates, requires those in the prescription-medicine supply chain to ensure product identification and verify whether outer packaging has been tampered with. For converters and packagers, this represents a significant opportunity to supply secure packaging.

## Automotive

The automotive industry is not only subject to counterfeiting of fake auto parts, but also to car trafficking and tampering with vehicles' authentication information to hide their original identities. These practices are not only illegal but can also be dangerous for anyone driving or riding in a vehicle with fake parts, because counterfeited cars lack supplier homologations and quality control. Counterfeit parts also cost the global auto industry an estimated US $20 billion annually.[3]

## Electronics

The market for electronic goods is growing at a rapid pace, and protecting products from counterfeiting is a particular challenge. Counterfeiters are not only trafficking in final products such as laptops and smartphones, but also their components. Security labels play an important role in detecting electronics fraud and ensuring that end-users receive authentic, high-quality products.

## Regulatory compliance

Tax stamps are used by governments in over 50 countries to protect tax revenue and regulate the quality and safety of goods such as cigarettes, spirits and premium drinks. In some countries, a tax stamp on such goods is mandatory. The World Health Organisation has estimated that about 25% of the alcohol consumed worldwide is considered to be unrecorded counterfeited or illegal alcohol.

## E-commerce & logistic

Revenue in e-commerce in the EU is expected to grow by more than 7% between 2019 and 2024.[4] For customers as well as e-commerce businesses, counterfeiting is one of the biggest threats. Our security label range can help businesses protect their packaging from tampering and opening and secure the authenticity of the goods they ship. Some online retailers, including Amazon, require all hygienic and topical goods to be protected with a security seal applied directly at the product's manufacturing site, which helps prevent used products that have been returned from being sold again. Our tamper evident security solutions comply with Amazon's security seal regulations.

Security label market trends

## Agrochemicals

Non-regulated and counterfeited pesticides result in over 200,000 deaths yearly and are consumed by over 3 million people annually, mainly in developing countries.[5] Security labels help prevent from agrochemical tampering and counterfeiting, protecting consumers and brand owners alike.

## Luxury goods

High-end clothing, perfumes and other goods are valued not only for their quality, but also for their brand image. Unauthorised replicas of luxury goods are sold in large volumes, particularly through online channels and even more so with the growing trend of online shopping. Adopting the right security measures to help customers distinguish authentic products from fake ones is now crucial for brand owners fighting potential damage to their reputations from lower-quality, illegal goods.

## Cosmetics

Cosmetics sold in Europe are subject to strict testing and regulation. The direct application of these products on the body requires that they be safe for consumers to use. Counterfeited cosmetic products are subject to no regulations and often contain dangerous and poisonous adulterants. Security labels can help merchants and consumers detect counterfeit products and can also help protect authentic items from tampering along the value chain.

## Food and beverage

Ready meal and grocery delivery has increased by over 75% during the Covid-19 pandemic. These delivered products can be a source of cross contamination if not responsibly handled. Security labels in food packaging offer visible proof of no tampering from preparation to delivery.

1 https://iccwbo.org/media-wall/news-speeches/global-impacts-counterfeiting-piracy-reach-us4-2-trillion-2022/

2 https://www.securingindustry.com/press-releases/pharmas-urged-by-trade-body-to-review-anti-counterfeiting-plans-ahead-of-no-brexit-deal-/s135/a12489/#.X6vz5MjYqUk

3 https://veridocglobal.medium.com/eliminating-counterfeit-auto-parts-89c50533cba5

4 https://ecommercedb.com/en/blogPost/2467/ecommerce-revenue-forecast-china-us-europe

5 https://www.washingtonpost.com/world/the_americas/in-agricultural-giant-brazil-a-new-and-growing-hazard-the-illegal-trade-inpesticides/2021/02/09/2c0b2f2e-30b3-11ea-a053-dc6d944ba776_story.html

Our products

# A range of protective features to choose from

Our security solutions cover what the eye can see—and well beyond. We offer both visible and invisible solutions, as well as digital solutions based on Radio-Frequency Identification (RFID) and Near Field Communication (NFC), and more.

Often, the right security label depends on a specific context—the product, the supply chain, the package type, and other factors. We can help you build a multi-layered security solution that's just right for your customers' needs.

**Overt security features – Visible**
Overt security features are designed to be evident to everyone, but difficult to duplicate. They not only discourage counterfeiters, but also allow end customers to easily detect tampering or identify genuine products. Some examples:

· **VOID materials** leave a visible message upon removal of the label, and the label itself changes once removed, preventing unauthorized re-use.

· **Destructible face material** offers reliable signs of ampering on packaging, and ensures labels can't be used again after removal.

· **Holography** and **optically variable devices** (OVDs) integrated in labels are instantly recognisable and difficult to copy. Multiple visual layers can be added to OVD design for increased protection.

**Covert security features – Hidden**
Covert security features are invisible to the eye and require special equipment to be detected. These features allow authentic products to be distinguished from fake ones, and used products to be distinguished from new, even after the label has been removed. Examples of covert features include special tracking fibers and adhesive traces or custom prints that are detectable under ultraviolet light.

**Forensics security features – Invisible**
Forensic security features are meant to be completely invisible to the naked eye and require specific equipment to be detected, making them especially challenging to duplicate. One example: an RFID tag embedded in a label or product that gives the item a unique digital i.d.

**Security adhesives**
The adhesive used in a security label plays a crucial role. It not only bonds the security features to the product or package—it can also be imbued with security features of its own. Our range of adhesives covers virtually any security-related application.

**Intelligent security labels**
RFID- and NFC-enabled labels can help thwart theft, counterfeiting, or misuse of manufactured goods through product authentication and inventory tracking that lead to more transparent supply chains. In addition, government regulations are driving track-and-trace efforts to bring transparency to a multitude of industries.

**Custom solutions**
Sometimes the most effective security label is the one you create yourself for a specific purpose. Our transfer tapes and gum twin constructions are the perfect solutions for transforming any material into a self-adhesive construction. These constructions offer the ultimate flexibility, allowing you to custom-design protective labels upon customer request.

"

Sometimes the most effective security label is the one you create yourself for a specific purpose.
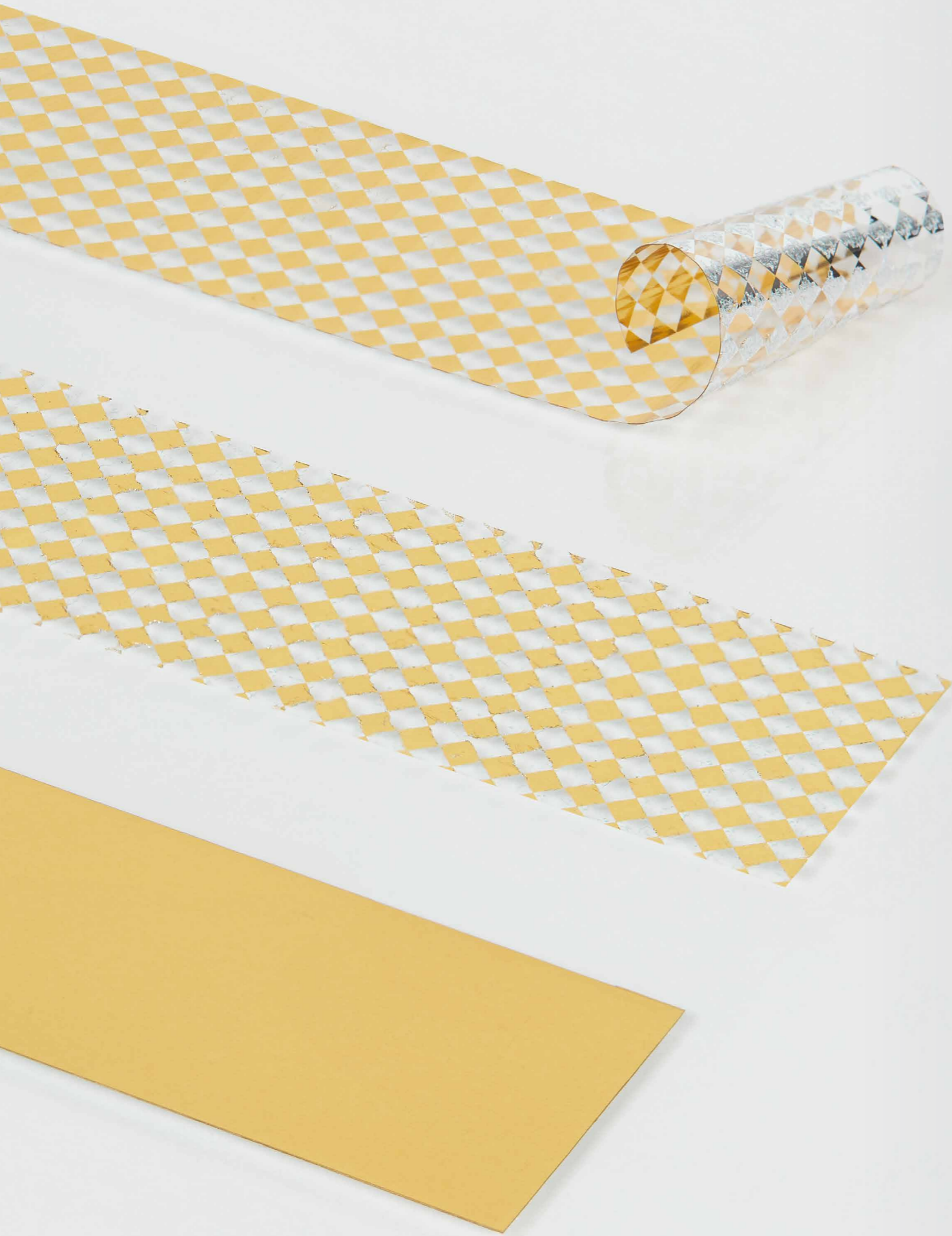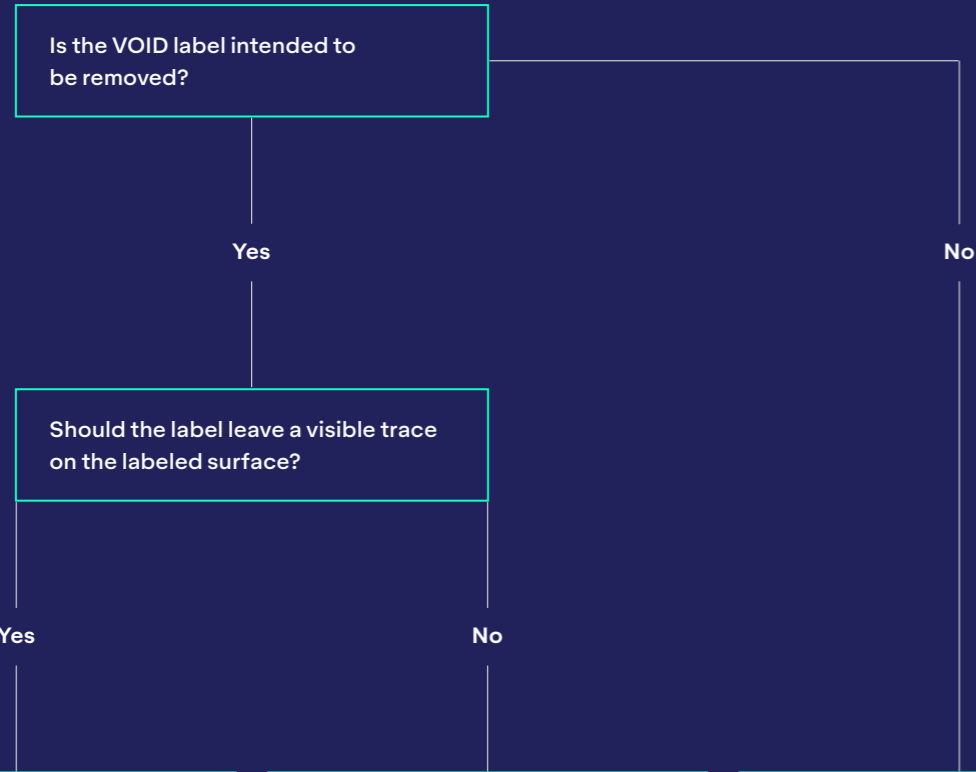
"

Our VOID Range

# Sending a message

Avery Dennison standard and custom void materials are an effective and hard-to-counterfeit solution to seal a package or protect information. When detached, these labels reveal permanent 'void' messages, ensuring that the package will not be used again.

All of our VOID solutions are customizable, and the standard 'VOID' message can be replaced by a message or logo of your customer's choosing. All VOID products are highly resistant to water, chemicals, grease oils, and ultraviolet light. Our VOID ranges cover all applications, protection of identification or warranty labels to high end tamper evident packaging sealing.

## Our VOID Range

### Choosing the right VOID type

Is the VOID label intended to be removed?

Yes

No

Should the label leave a visible trace on the labeled surface?

Yes

No

## Dry peel VOID (Flexsecure)

Dry VOID labels are designed for temporary security seals where a permanent VOID message should be left on both the label and the labeled packaging upon removal of the label. The message is left on the substrate as a non-tacky filmic surface. Once removed, the label loses all tack, ensuring it cannot be re-applied. These labels are meant to be removed once the packaging is opened.

Example applications: high end tamper-evident label to seal packaging boxes (eg luxury good or cosmetic packaging).

## No residue VOID (Removable VOID)

No residue VOID labels are designed for temporary security seals where no VOID or adhesive residues should be left behind upon removal of the label. Once the label is removed, an irreversible void message will be revealed on the label without leaving any traces of adhesive on the labeled area of the package. An excellent choice for applications that seek to protect but not damage packaging or labeled surface.

Example applications: temporary sealing where no damage should be done to the labeled surface (eg sealing a laptop closed, hotel doors after cleaning).
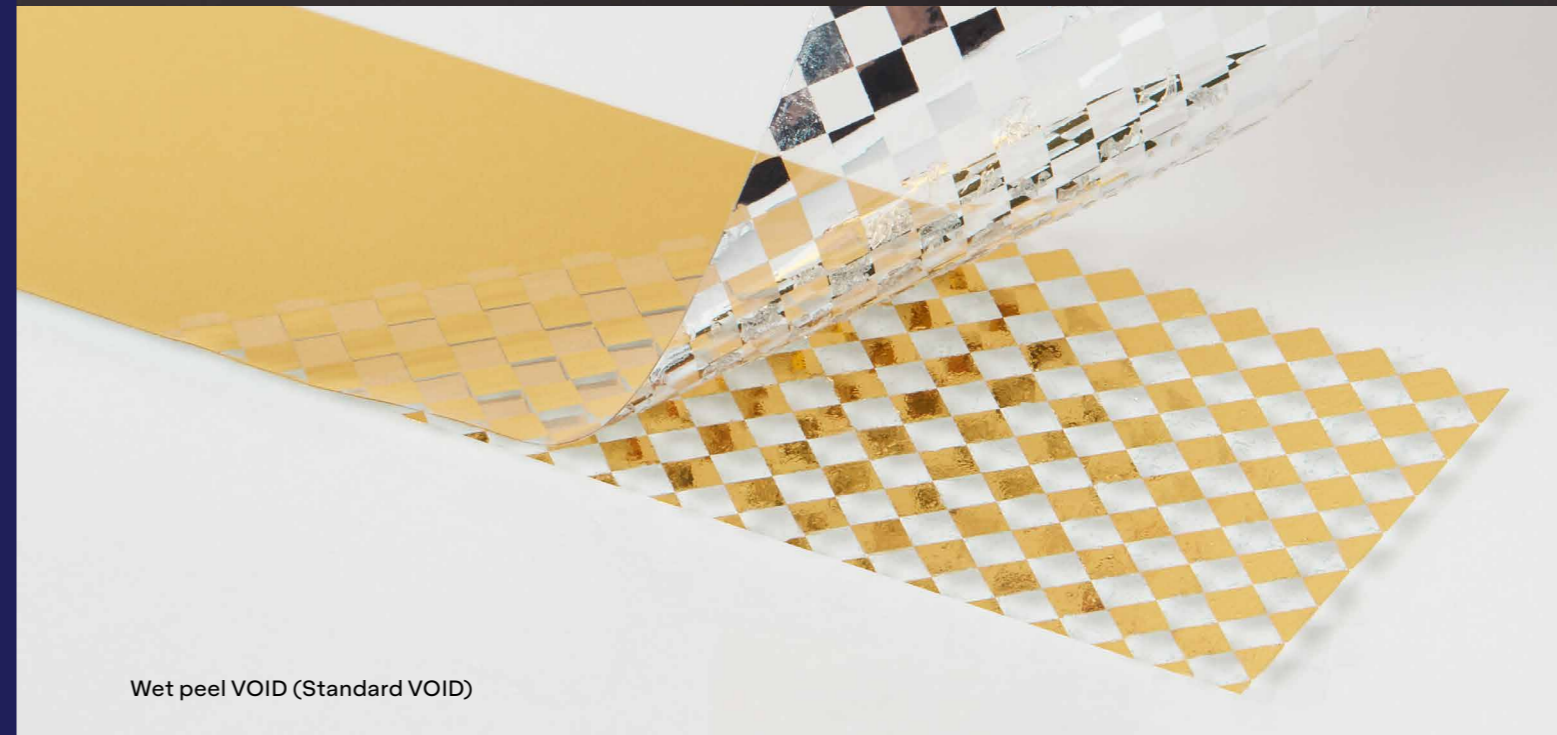
## Wet peel VOID (Standard VOID)

Wet VOIDs are used to protect the information printed onto it. These VOID labels are not meant to be removed. Upon removal of the label, a permanent message is left on the substrate and a visible "negative" of the VOID message on the label, ensuring the label cannot be applied elsewhere.
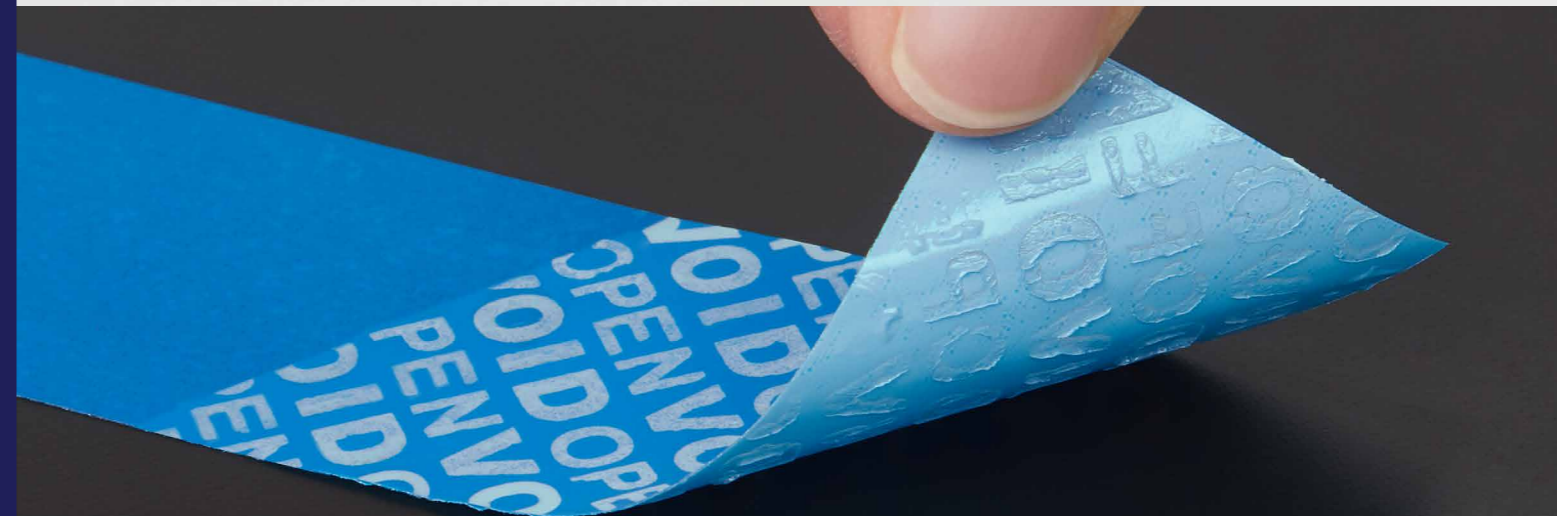
Example applications: permanent security label (eg warranty or product identification label).



Dry peel VOID (Flexsecure)



Wet peel VOID (Standard VOID)



No residue VOID (Removable VOID)

# Our VOID Range

## Dry peel VOID (Flexsecure)

| Face color | Face material | VOID message | Product code | Product name | Main security feature for the application |
|---|---|---|---|---|---|
| Silver | PET50 | 'VOID' | BX623 | PET50 VOID SIL DRY PEEL S700–BG45WH LR | A dry peel silver VOID label. Ideal to seal any packaging, ensuring the content of it has not been tampered with. |
| Holographic | PET50 | 'VOID' | AI307 | Flexsecure Holographic S700–BG45WH | A dry peel holographic VOID label. Ideal to seal any packaging, ensuring the content of it has not been tampered with. |
| Clear | PET50 | 'VOID' | AM373 | Flexsecure Clear S700–BG45WH | A dry peel transparent VOID label. Ideal to seal any packaging, ensuring the content of it has not been tampered with. |
| White | PET50 | 'VOID' | AI308 | Flexsecure White S700–BG45WH | A dry peel white VOID label. Ideal to seal any packaging, ensuring the content of it has not been tampered with. |

## Wet peel VOID (Standard VOID)

| Face color | Face material | VOID message | Product code | Product name | Main security feature for the application |
|---|---|---|---|---|---|
| Matt Silver | PET50 | 'VOID' | AA973 | ZZ VOID PET50 Matt Silv S697–BG45WH | Premium wet VOID material for broad security applications. |
| Matt Chrome | PET50 | Checkerboard pattern | AB048 | PET VOID Check Matt Chrome S8015–BG42WH | High performing automotive grade wet VOID solution. UL969 and CSA C22 No 0.15 certified. |
| Matt Chrome | PET50 | Checkerboard pattern | AV544 | PET VOID Check Matt Chrome S8039–BG42WH BSS | High performing automotive and electronics grade wet VOID solution. |
| Matt Chrome | PET50 | Checkerboard pattern | BJ018 | PET VOID Check Matt Chr AL170–HF140 | High performing automotive and electronics grade wet VOID solution. |
| White | PET50 | 'VOID' | AB176 | VOID PET50 White S697–BG45WH | Premium wet VOID material for broad security applications. |
| Clear | PET50 | 'VOID' | AB596 | VOID PET50 Clear S697–BG45WH | A flexible filmic void for edge labeling, with a pharmaceutical adhesive for application on varnished cardboard. |
| Gold | PET50 | Checkerboard pattern | BR617 | PET Gold VOID S697–BG45WH | Premium wet VOID material for broad security applications where a premium visual is needed. |
| Clear | PP50 | 'VOID' | BK487 | VOID PP50 Clear S799P–PET30 | A premium VOID solution for pharmaceutical varnished cardboard boxes. |

## No residue VOID (Removable VOID)

| Face color | Face material | VOID message | Product code | Product name | Main security feature for the application |
|---|---|---|---|---|---|
| Red | PET38 | 'VOID' | BJ987 | VOID Removable Red | General brand protection and tamper evidence where no traces are to be left on packaging. |
| Blue | PET38 | 'VOID' | BT153 | VOID Removable Blue | General brand protection and tamper evidence where no traces are to be left on packaging. |
| White | PET38 | 'VOID' | BN962 | VOID Removable White | General brand protection and tamper evidence where no traces are to be left on packaging. |

# Custom VOID materials

From face to adhesive, adding customised security layers on VOID materials has never been easier. Let's work together to determine the most effective construction for your application.

## Covert UV message

A customised print can be added to the face material using inks that are only visible when exposed to UV light. This adds a hard-to-reproduce security layer to the construction.

## VOID technology and message

Choose from Flexsecure, Premium or Removable VOID depending on your needs. Display the message of your choice—possibilities include: display a logo, a pattern or a custom message that is revealed when the label is tampered with.

## Adhesive

Choosing the right adhesive for your label is always crucial, especially when working with void materials. Our wide range of adhesives is sure to offer the right adhesive for your application. What's more, we can add extra hidden security layers to your label construction via the adhesive. One example: Our UV-footprint adhesive leaves a UV trace on the labeled surface after the label has been removed.

## Label appearance

With our Polyester VOID Range, you can choose the visuals that suit your needs best, with a VOID message that matches the color of your face material. Choose from silver, transparent, holographic and more. The color of our removable VOID label can be fully adapted to match your requirements.

## Face materials made with post-consumer waste

The latest addition to our portfolio are face materials containing recycled PET plastic and other post-consumer waste (PCW) to support materials circularity and make products more sustainable.

> " You supply the vision. We'll supply the materials and expert help to bring it to life. "



## Build your void label

| VOID technology | Face material | Face material color | | | | | | | | | Customizable VOID Text |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | Silver | Chrome | Gold | White | Clear | Holo-graphic | Red | Blue | Custom* | |
| Dry peel VOID (Flexsecure) | PET50 | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | Yes |
| | rPET50 | ✓ | | ✓ | ✓ | ✓ | ✓ | | | | Yes |
| Wet peel VOID (Standard VOID) | PET50 | ✓ | ✓ | | ✓ | ✓ | | | | | Yes |
| | rPET50 | ✓ | ✓ | | ✓ | ✓ | | | | | Yes |
| | PP | | | | ✓ | ✓ | | | | | Yes |
| | PE | | | | ✓ | ✓ | | | | | Yes |
| | Paper | | | | ✓ | | | | | | Yes |
| No residue VOID (Removable) | PET50 | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | Yes |
| | PET36 | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | Yes |

*Color on request

Destructible facestocks

# Made to go to pieces

Destructible facestocks are a clever solution for revealing signs of tampering and ensuring that a label can't be re-used. Ranging from fragile to ultra-destructible, our destructible label constructions come with paper or film facestocks to suit virtually any application and budget.



Security paper



Sharp tear

## Paper

**Security paper – White**
We combine a cost effective, security paper free of optical brightening agents (OBA Free) with a permanent adhesive to create a versatile and reliable sealing effect. The heat-resistant adhesive ensures that no removal of the label is possible without damaging the paper face material.

## Film

**Sharp tear – White**
A flexible mono oriented film suitable for tamper evident application to seal packages. The mono oriented film allows for a clean tearing of the film done by the customer.

**Foamtac II – White**
A co-extruded film made of an expanded polystyrene layer with a high-impact polystyrene printable skin. This material offers a versatile tamper-evident film with easy converting properties, yet fractures upon attempted removal.

**PEHD TE – White/White OPQ**
A PEHD ultra-destructible film with a print- receptive surface. Ideal for most security applications that require high tamper-evident properties. Available an opaque version that can hide information printed beneath.
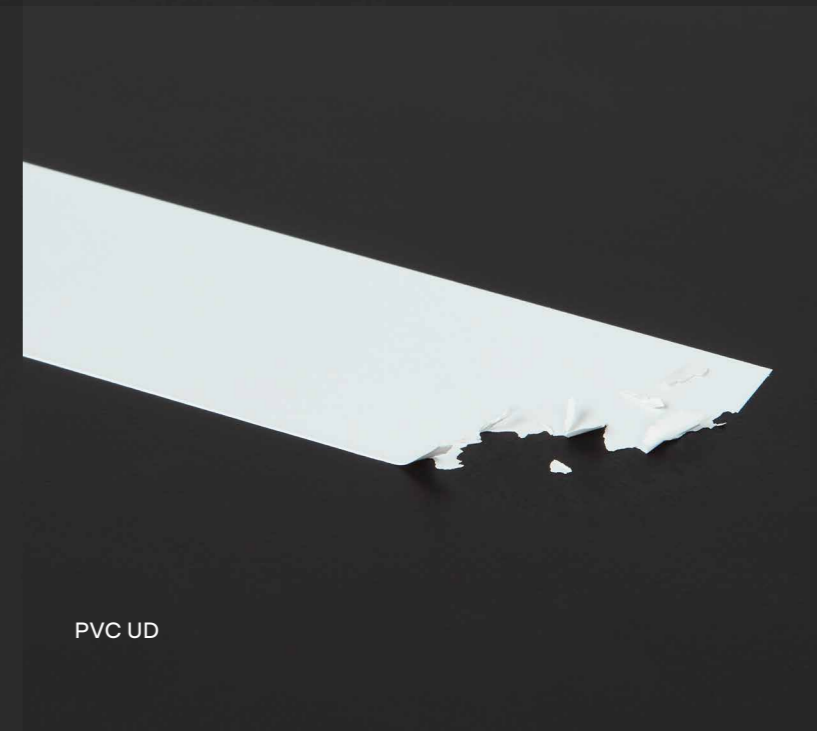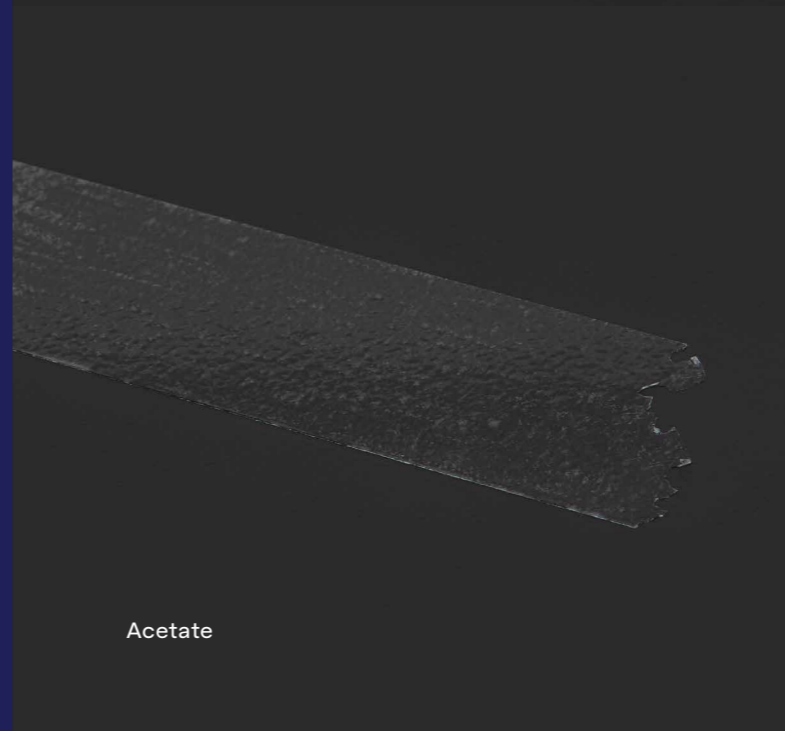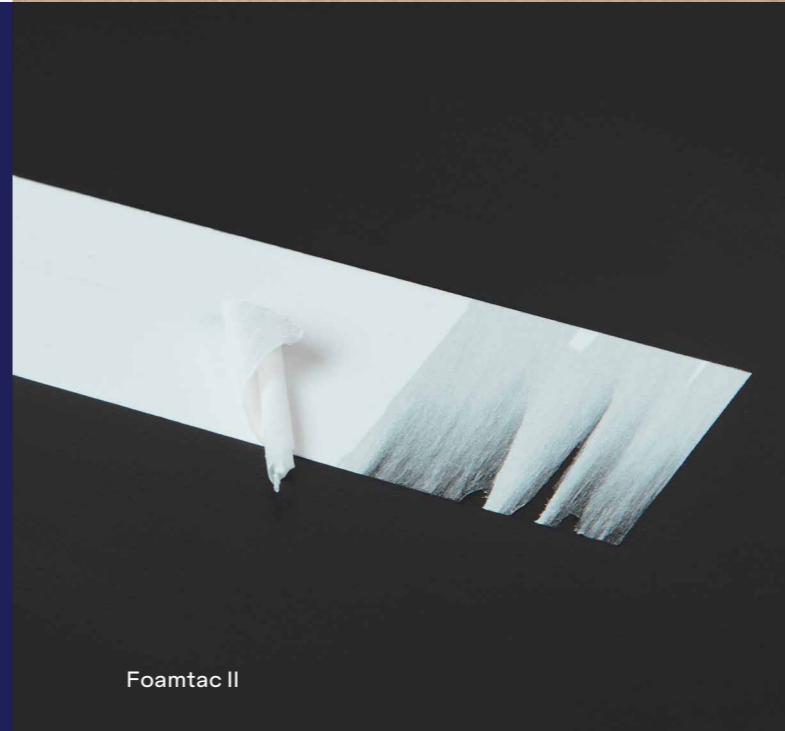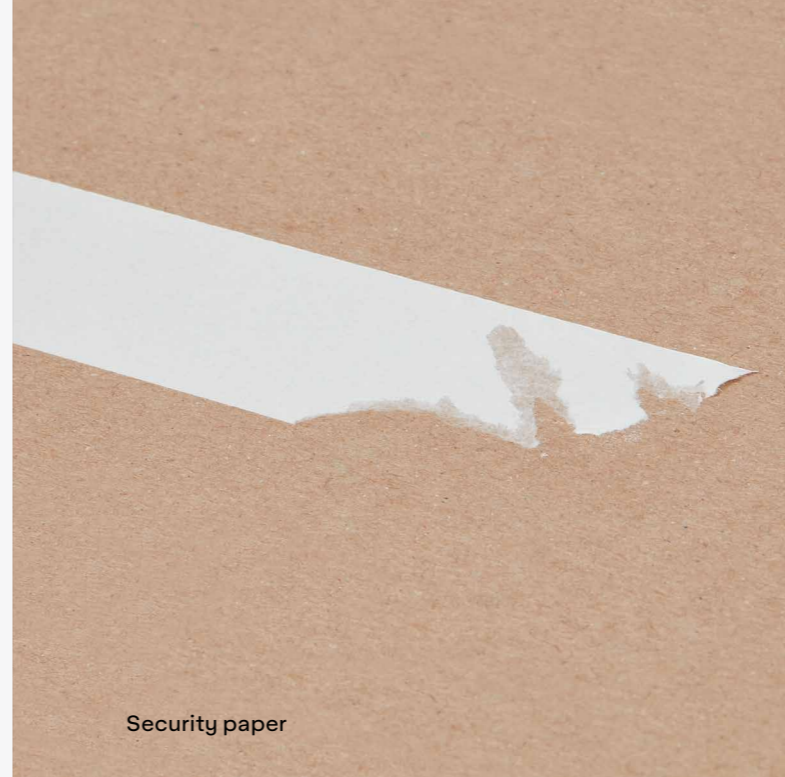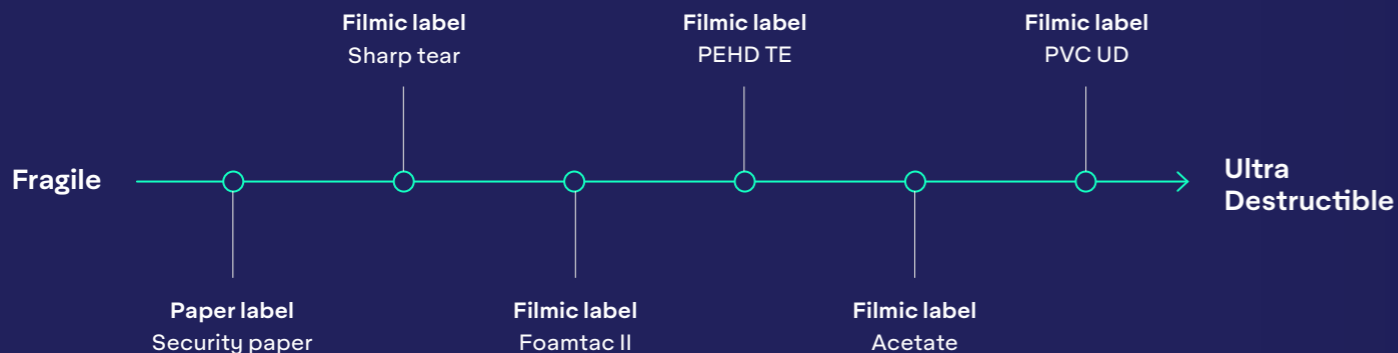
**Acetate – Clear/Matt white**
An ultra-desctructible cellulose acetate film that is both biodegradable and compostable. This face material's intrinsic fragility offers a high level of inviolability to the labeled good or packaging when combined with the right permanent adhesive.

**PVC UD – Matt/Semi-Gloss White**
This ultra destructible film coated with an extra permanent adhesive is ideal for any challenging tamper-evident labeling application. It features a matt and semi-gloss white cast vinyl that is cadmium-free.



Foamtac II



PEHD TE

## Scale of fragility

| | Filmic label Sharp tear | | Filmic label PEHD TE | | Filmic label PVC UD |
|---|---|---|---|---|---|

Fragile ———————————————————————→ **Ultra Destructible**

| Paper label Security paper | | Filmic label Foamtac II | | Filmic label Acetate | |



Acetate



PVC UD

## Destructible facestocks

Our standard destructible face constructions
are listed in the table below. We can combine
our facestocks with adhesives other than those
listed to ensure the highest performance for your
application. See more of our adhesive range in our
Adhesives Technical Guide.

| Face material | Face name | Color | Product code | Product name | Adhesive |
|---|---|---|---|---|---|
| **Paper** | Security MC60 FSC | White (OBA free) | AX772 | Security MC60 FSC S2000N-BG40BR | S2000N |
| | Security MC60 FSC | White (OBA free) | AI879 | Security MC60 FSC S2060N-BG45WH FSC | S2060N |
| **Film** | Foamtac II | White | AA717 | Foamtac II S2000N-BG40WH FSC | S2000N |
| | Foamtac II | White | AA961 | Foamtac II S700-BG40BR | S700 |
| | PEHD TE | White | BQ731 | PEHD TE S700-BG45WH | S700 |
| | PEHD TE | White | AI881 | PE HD TamperEvident WH S3100-BG45WH FSC | S3100 |
| | PEHD TE | White OPQ | BT731 | PEHD TE OPQ S700-BG45WH | S700 |
| | Sharp tear | Clear | AU380 | Sharp Tear CLEAR S4700 INC-BG40WH FSC | S4700 INC |
| | Sharp tear | White | AU381 | SHARP TEAR WHITE S4700 INC-BG40WH FSC | S4700 INC |
| | Acetate | Clear | AF289 | ACETATE CLEAR S697-BG40BR | S697 |
| | Acetate | Matt white | AF356 | ACETATE MATT S697-BG40BR | S697 |
| | Acetate | Clear | BW744 | ACETATE CLEAR S799P-BG45WH FSC | S799P |
| | PVC UD | Gloss white | EC197 | PVC GLOSS WHITE UD MP499-BG50WH | MP499 |
| | PVC UD | Gloss white | AF765 | PVC MATT WHITE UD S690-BG50WH | S690 |
| | PVC UD | Semi Gloss white | AZ426 | PVC SEMI GLOSS WHITE UD S2000N-BG50WH | S2000N |

Tamper-evident label materials

# The damage done

Choosing a label that damages the package upon removal might run contrary to what a label is supposed to do. But to help ensure the authenticity of pharmaceuticals and other products, it can be critical to make sure that the packaging cannot be reused once it's been opened.

We offer a variety of materials that create a strong seal and, upon removal, leave no question about the box being opened and making it less likely that counterfeiters will attempt to use it again.

## Face material

We offer a range of polyethylene and polypropylene films that are strong enough to not break under tampering, but flexible enough for edge labeling.

## Adhesive

A high-performance, permanent adhesive is key. Our S799P adhesive is engineered to deliver optimal performance on different types of cardboard varnish and is especially suited to boxes in which medicines are packaged.

## Customisation

Customizing the label for a particular package can help ensure maximum security. Our adhesives and facestocks can be mixed and matched to create the perfect combination for your application. We can also add a unique holographic strip to the construction to further enhance brand protection.

| Application | Product code | Product name | Main security feature for the application |
|---|---|---|---|
| **Pharma** | BJ772 | PP NG Top Clear S799P-BG45WH FSC | For pharma applications on varnished cardboards. |
| | BQ765 | PP50 Top Clear Lumi BL S799P-BG45WH FSC | For pharma applications on varnished cardboards with a UV lumi top coating. |
| **All** | BE102 | PP90 Top Clear S4700 INC-BG45WH FSC | A high performance product for general box damage applications. |
| | BE524 | PET12 Top Clear S4700-BG40WH FSC | A high performance product for general box damage applications. |
| | AG615 | PP Top White S700-BG45EH FSC | A high performance product for general box damage applications. Suitable for apolar surfaces. |

Holographic label materials

# Image is everything

Holographic solutions offer a unique and hard- to-copy label that assures end-users their product is safe and authentic. We offer a comprehensive range of customisable holographic label materials, backed by the expertise and assistance of our technical teams.

## Holographic visuals

Choose from micro-embossed metallised paper or films with 2D and 3D holographic diffraction patterns.

## Face material

From paper to polyester, we have the right base material for your application. Choose from  paper, paper + BOPP, paper + PET, BOPP and PET.

## Adhesive

As with any security label, adhesive plays an essential role in holographic labels. You'll find the right solution for your substrate among our wide range of adhesives. A transfer tape and gum twin construction can allow you to add security features to your construction while building your  adhesive complex in-house for a more custom solution.

## Customisation

Customise your holographic construction by choosing the most suitable face material and adhesif for your application. Create your holographic visual on paper or film. Your custom designs can be registered with the Industrial Hologram Manufacturers Association (IHMA) database for further security.

> " Your custom designs can be registered with the Industrial Hologram Manufacturers Association database for further security "

Security that sticks

# Choosing the right adhesive

Choosing an adhesive is among the most critical decisions you'll make to ensure the best performance of your security-label construction. Application, substrate, and face material are all important factors. We offer purpose-engineered adhesives refined over decades that deliver consistently reliable performance and add value to security packaging in multiple industries, under often-tough conditions.

Use our Adhesive Technologies Technical Guide to select the right adhesive for your specific application.

**For the pharmaceutical industry**
Pharmaceutical manufacturers work with a wide range of varnished folding boxes. Each box potentially uses a different varnish technology, posing a challenge for the adhesion of tamper-evident seals. Brands want a universal solution that will work on all their packaging and comply with European Union Directive 2011/62/EU requirements. Our pharmaceutical adhesive solutions comply with current regulations and deliver consistently excellent results on multiple box varnishes.

**For automotive**
Automotive labels have to stand up to a range of challenges, including harsh chemical environments, challenging substrates and the stresses imposed by vehicle use and maintenance. Applying the right adhesive is crucial in ensuring the label will remain on the substrate and perform as expected. Our Automotive range adhesives have proven themselves in the most extreme environments, meeting the performance criteria of supply chain processes, industry regulations and OEM specifications.

**For electronics**
Electronics security labels must perform on all kinds of surfaces and under all kinds of conditions and temperatures. A strong adhesives ensures the label will hold fast. Our adhesive portfolio for electronics is based on special solvent acrylic formulations that stand up to the elements and counterfeiters, too. Once our label is applied to the substrate on removal, an irreversible "checkerboard" footprint message will detach itself from the face film. Labels which have been removed cannot be reapplied since repositioning will leave visible proof that tampering has taken place.

**Heat resistant adhesives**
For tamper-evident and anticounterfeiting labels, the adhesive must hold strong even when exposed to the heat often used to illicitly open packaging. Our UV warm melt adhesive solutions perform reliably even when exposed to heat and cannot be removed without showing traces of tampering.

**Adhesives for rough surfaces**
Rough surfaces like cardboard and certain plastics can be a challenge to label. We've designed several adhesives specifically for such substrates, with coat weights optimized for your application.

**Water-resistant adhesives**
When labeled goods might be exposed to high levels of humidity or direct contact with water, an adhesive with high bonding strength is essential. Our water-resistant, solvent and acrylic adhesives offer very good performance for such applications. They are proven to work in the most challenging water exposure, and are regularly used for BS 5609-certified constructions.

**Low surface energy labeling**
Low surface energy surfaces such as high-density polyethylene (HDPE), low-density polyethylene (LDPE) and polypropylene (PP) are usually difficult to label because of their low bonding capability with standard adhesives. Our rubber-based, solvent-based or high-end hybrid solutions hold tight on substrates with low surface energy, for security labels brands can use with confidence.

**High surface energy labeling**
High surface energy substrates such as stainless steel, aluminium, polyethylene terephthalate (PET), acrylonitrile butadiene styrene (ABS) and glass lend themselves to relatively high adhesion andare compatible with most adhesive technologies. When painted, they can lose their cohesive properties and require an adhesive engineered for such a surface. We offer a number of adhesives that perform reliably with both painted and unpainted high surface energy substrates.

DIY for security and speed

# Materials for custom label constructions

More label converters are discovering the benefits of building their own premium security constructions in-house. The benefits? The flexibility to create small volumes of security labels quickly.

Our transfer tapes and gum twins are designed to turn any face material into a self-adhesive label, making them the perfect starting points for custom constructions.

**Custom Label Constructions**
Labels + Packaging
Technical Guide
Europe
2020

Use our Custom Labels Technical Guide to select the Transfer Tape and Gum Twin construction for your specific application.



## Transfer tapes

Transfer tapes are a reliable and flexible solution for creating custom security labels with a high level of complexity. The adhesive on the tape is covered on both sides by a liner. Each liner has a different release level, ensuring a smooth application onto the face material. Combined with the right adhesive, transfer tapes are an economical solution that allows converters to turn uncoated security face materials into a pressure-sensitive security label.

This illustration shows a transfer tape construction, with the adhesive between two liners.

*Diagram labels: Liner, Adhesive, Liner*
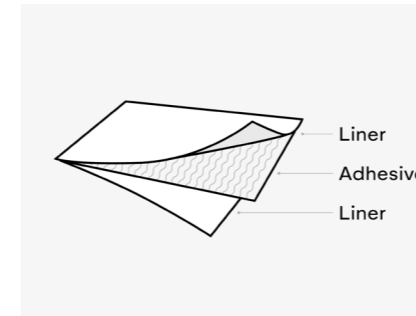
## Gum twins

Like transfer tapes, gum twins, also called double sided tape, can turn an uncoated security face material into a pressure-sensitive solution. The difference? Gum twins offer a deeper level of customization. The construction features a layer of adhesive on each side of the chosen face material, offering the opportunity to choose two different adhesives—one optimized for the face material, and one optimized for the surface to be labeled. This versatility makes gum twins ideal for complex custom security constructions, allowing you to choose filmic or paper facestocks with different colors and opacities. (Filmic face materials add tear resistance and a chemical barrier between the face and the labeled surface). The rigidity provided by a gum twin's face material also enables better high-speed converting.

This illustration shows a gum twin construction, with a layer of adhesive on each side of the face materials.

*Diagram labels: Liner, Adhesive, Face, Adhesive, Liner*
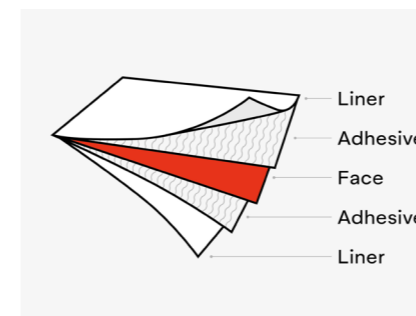
## Making it your own

Customisation and flexibility are key in creating a security label. Both our transfer tape and gum twin solutions are fully customizable based on your and your customers' needs. Have an idea? Tell us about it. Our technical experts are here to help you realize your vision.

**Build your own construction**
Choose your own face material adhesive and liner.
Certain face materials will add opacity and rigidity to your final label and canact as a chemical barrier to prevent content migration. Colored materials can help make your constructions unique.

**Choose your gum pattern**
Special gum patterns (SGP) are used during our adhesive coating processes to leave areas of the material free from adhesive. These can also be customized to optimize your converting processes.

**Brand it**
For brand recognition, you have your liner printed with a logo, brand name, or message. The same can be done on face material before they are coated with adhesive.

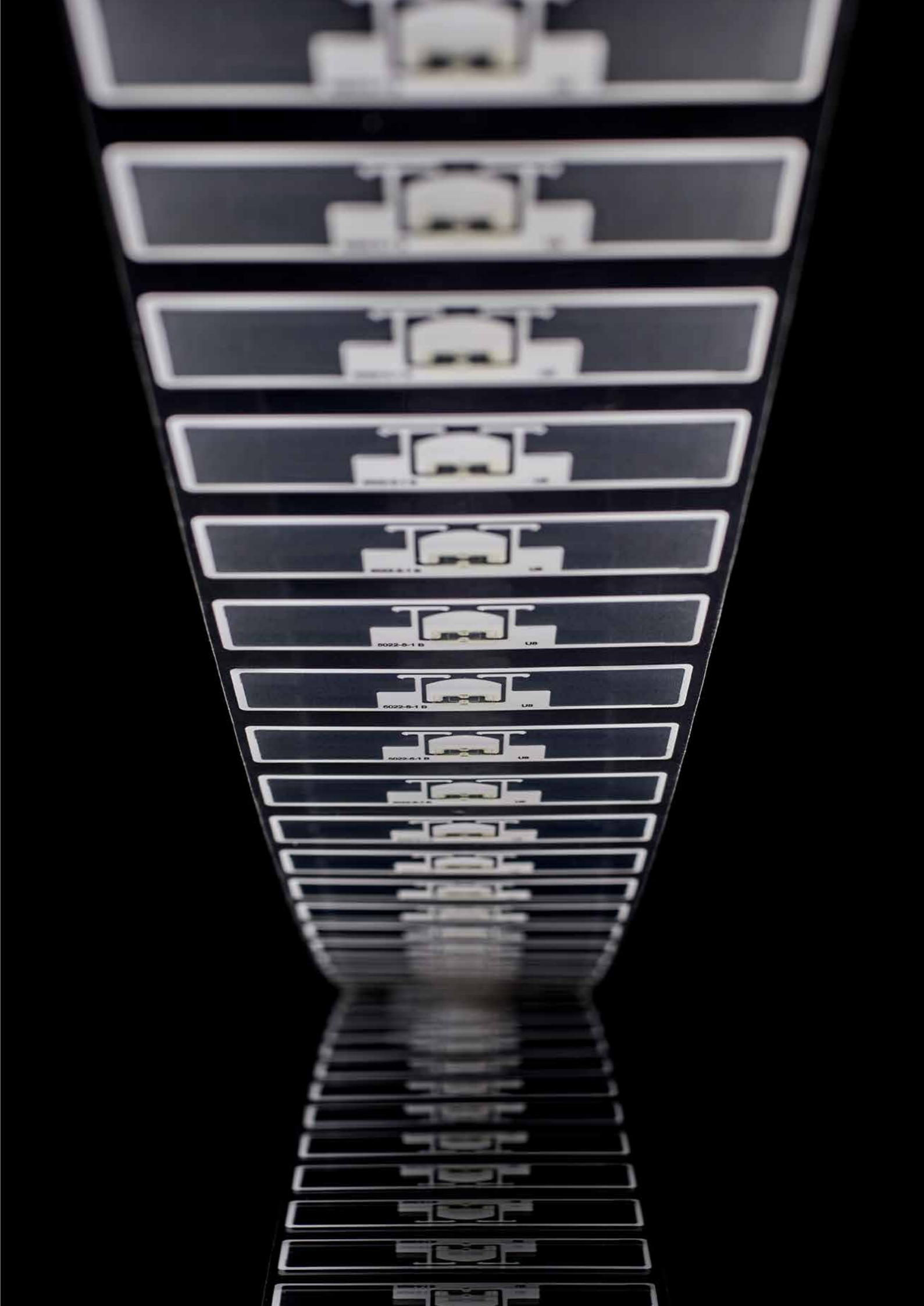# Intelligent label solutions

Digitization has changed the world in recent decades, and in the wake of COVID-19, that trend is accelerating. By invisibly providing any item with a unique digital identity or "digital twin," labels embedded with a Radio Frequency Identification (RFID) tag offer powerful capabilities for tracking, securing and authenticating products and fighting counterfeiting and product diversion. As the world's largest UHF RFID partner, we're ready to help you select and convert the right RFID solution for your application.

**Track, protect, authenticate.**
Whatever the product, whatever the package, our wide range of RFID products has a solution to fit your needs.

| Application(s) | Product name | Main security feature for the application |
|---|---|---|
| Multi use | AD229 Inlays | Product Authentication, Package Tracking, Pallete Identification |
| Multi use | Circus™ | Brand Protection, Product Authentication |
| Multi use | Minitrack / Microtrack | Product Authentication |
| Multi use | Viper | Brand Protection |
| Multi use | AD385 Inlays | Brand Protection, Package Tracking, Pallete Identification |
| Multi use | AD681 Inlays | Package Tracking |

# Avery Dennison: Your Partner for Security Solution labelling

With our unique combination of materials expertise, innovative, end-to-end technology and global capacity for supporting customers, Avery Dennison's intelligent labels business is helping to define the future of multiple industries by demonstrating how to capture the transformative benefits of connecting nearly any item to the game-changing capabilities of the internet and mobile technology.

## Who we are

At our heart, we are a materials science company. We leverage sophisticated engineering and materials expertise along with adhesive manufacturing expertise, and integrate each with our leading capabilities for manufacturing pressure-sensitive solutions for a large panel of applications. It's a unique combination that gives us a presence in a large range of industries including security labelling. We combine imagination and intellect and unique manufacturing capabilities in the bold pursuit of solving big problems.

## What we stand for

**Making things smarter, more secure, and safer.**

In 1935, we invented the first self-adhesive label, and we've never looked back. With each passing decade, our innovations have further shaped our industry by lifting the limits on what labels can do. The world's most successful brands know that innovation and evolution are the lifeblood of longevity and success. We're proud to help our clients continually expand the boundaries of what's possible.

## Work with us

You're the expert in your business; we're the expert in labelling solutions. Contact your business development manager or your Avery Dennison sales representative today to find out how Avery Dennison Security Labels can meet and exceed your needs.

label.averydennison.com

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