

The ultimate guide to Linerless labelling

[Linerless labelling](#) is no longer an emerging technology but an established, widely adopted and scalable alternative to traditional self-adhesive labels. Nor is it hard to see why they're becoming such an attractive option for such a wide range of businesses.

With manufacturers, logistics firms and retailers alike all looking for ways to curb waste, cut operational costs and improve efficiency, linerless labelling is no longer a niche choice but a mainstream labelling solution.

In this guide, we'll look at what linerless labels are, how the technology works and how it's used, while also looking at common misconceptions. Whether you're looking into linerless labelling for the first time or considering an upgrade of your existing system, we'll provide a comprehensive overview.

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What are Linerless labels?

Linerless labels are pressure-sensitive labels without the traditional backing paper (known as a "liner"). Rather than relying on a separate disposable layer, linerless labels use a special release coating applied to the facestock itself, allowing labels to be wound on a roll without sticking to one another. When the label is printed and dispensed, a built-in cutter cuts it to the required length.

The absence of any backing layer is the defining characteristic. Conventional adhesive labels are die-cut with a support liner that must be removed and discarded once the label is applied. This liner has no technical value after dispensing but adds significant material, waste and cost. Linerless labels eliminate this entirely to produce a roll containing more usable labels and no liner waste.

The linerless system is made up of three main components: the facestock material, the adhesive and the release coating. The direct thermal facestock reacts to a printhead to produce print using a chemi-thermal reaction, therefore no print ribbon is required,

reducing waste further. As the surface does not need to be thermal transfer receptive, it can be coated with the release agent required for the media not to stick to itself. This provides a flexible labelling solution that can be used for a wide range of industrial, logistics and retail applications.

How Linerless labelling works

In a linerless system, labels are not pre-cut, but rather the printer creates variable-length labels on demand. The process begins as a continuous roll of media that moves through a thermal printhead which applies the required text, barcodes or graphics. A guillotine cuts the label to the required length and the label is dispensed ready for manual application or onto an application tool for print and apply.

The release coating plays a vital role in this process, allowing the adhesive side to sit safely against the label above it on the roll without unwanted bonding. During printing, it ensures smooth feeding, maintains print quality and prevents gum from building up on components.

Perhaps the biggest shift is the move from fixed label sizes to on-demand lengths. Rather than stocking multiple SKUs for different label formats, one roll of linerless material can support a wide variety of label lengths. This reduces changeovers, simplifies stock management and ensures scalability across product ranges.

Understanding the technology

Printers

Linerless-compatible printers are designed to handle continuous coatings of adhesive and release material without degradation. Key features typically include reinforced platen rollers to resist the abrasive nature of the release coating and carefully managed heat settings for consistent imaging. A robust cutter mechanism is also essential as it replaces the die-cutting that would occur during the manufacture of conventional labels.

Linerless printers are available in varying formats, including desktop, mobile, industrial and high-speed units for automated manufacturing lines. The right choice ultimately depends on volume, environment and integration requirements.

Applicators

Linerless applicators mirror the functionality of conventional systems but with a few noteworthy differences. Because labels have no pre-defined shape and size, the applicator must work with variable-length output. Wipe-on, tamp and blow applicators can all work effectively with linerless technology, though some may need adjustments to timing, position sensing or cutter synchronisation.

For high-speed operations such as e-commerce fulfilment centres or automated packaging lines, applicators must also manage the rapid cutting and dispensing of labels without compromising on accuracy. Modern systems can be integrated seamlessly with conveyors, scanners and quality inspection systems.

Adhesives

The adhesives used for linerless labels are carefully engineered to prevent premature sticking while still providing reliable adhesion. Permanent adhesives are common for shipping and logistics uses, while removable and repositionable adhesives are commonly used in retail and healthcare.

There are also specialist adhesives designed for use in particularly challenging environments, including cold-chain logistics and high-moisture [manufacturing](#) processes.

The benefits of linerless labelling

Sustainability

Environmental sustainability is one of the strongest plus points of linerless labelling. Dispensing without the need for backing liner eliminates tonnes of silicone-coated paper waste, much of which cannot be recycled easily.

Also, with more labels per roll, transport emissions are lower and storage needs are reduced. Switching to linerless labels thus often aligns closely with business sustainability strategies, especially for firms shipping large volumes or operating multi-shift packaging lines.

Efficiency

When linerless labelling is introduced, operational speed can increase significantly. Because each roll contains more usable labels, roll changes are required less frequently; this improves throughput and reduces costly downtime.

Teams also handle fewer consumables, so the workplace is cleaner and debris from discarded liners is eliminated. In automated environments, these improvements can have a tangible effect on line performance and labour productivity.

Cost savings

The efficiency improvements of linerless labelling also translate directly into cost reductions. More labels per roll mean fewer purchases of consumables, along with lower transport and storage costs. The elimination of liners also reduces disposal expenses, which can mean considerable savings for facilities shipping thousands of parcels per day, for example.

Applications across key industries

Logistics and warehousing

Linerless is a natural fit for logistics operations because it can produce labels of variable lengths at high speed. Shipping labels, SSCC pallet labels and bulk dispatch labels can be produced on demand without the need for multiple roll types. This increased roll capacity and reduced downtime especially benefits high-volume distribution centres.

Retail

In retail environments, linerless labelling is used for price-marking, promotional labels and shelf-edge updates. The reduced waste is particularly valuable in busy stores where every efficiency improvement makes a difference. The flexibility of variable lengths offered by linerless also supports a wider range of label designs.

Manufacturing

Manufacturers use linerless labels for product identification, such as Traded Unit Case (TUC) labelling and Serial Shipping Container Codes (SSCC) pallet labelling, goods-in-coding and work-in-progress tracking. Because these labels can be cut to custom lengths, one consumable can support a diverse product portfolio. The technology also integrates easily into automated packaging lines, where uptime and consistency are of the utmost importance.

Common myths and misconceptions

One of the most persistent myths about linerless labelling is that linerless labels do not adhere as well as traditional labels. In fact, adhesion performance depends on the choice of adhesive and surface compatibility, not by the presence or absence of a liner.

Another misconception is that linerless is suitable only for simple or low-volume applications. This may have been true a decade ago, but modern linerless materials and high-speed applicators are designed for (and commonly used in) high-throughput industrial environments.

Cost is another area of uncertainty for many people. While linerless systems may require slightly different printers or cutters, the reduced usage of consumables and elimination of waste mean that the total cost of ownership is often lower, especially at scale.

Challenges of linerless labelling

For all its numerous advantages, it's fair to say that linerless labelling has its challenges as well. It's important to be aware of these so that you can take steps to mitigate once you introduce a linerless labelling system in your own business.

For instance, adhesive build-up can occur if printers aren't properly maintained, because the absence of a liner can expose internal components more directly to adhesive. However, the effects of this can be entirely mitigated through regular cleaning and appropriate handling.

Cutter mechanisms also undergo more stress because they are responsible for cutting each and every label. In high-volume environments, cutter longevity needs to be factored into planned and routine maintenance.

There are also some application limitations, particularly when very small or unusually shaped labels are required. Since linerless labels are cut from a continuous roll, complex die-cut shapes cannot be produced on demand.

Supply chain consistency is another consideration. Because linerless labelling requires precise engineering, not all suppliers offer identical materials or performance. Organisations should work with trusted partners to ensure consistency, continuity and quality.

■ How to choose the right linerless solution

Selecting the right linerless labelling solution begins with understanding the production environment; temperature, speed, surface and humidity will all have a bearing on your choice of material. Throughput requirements and printer compatibility should be examined carefully, especially for automated lines where accuracy and uptime are critical.

Durability requirements should also be considered, as some applications require resistance to abrasion, moisture or exposure to chemicals. Testing is crucial, which is why reputable suppliers can provide sample rolls or arrange trial runs to ensure compatibility with products and processes.

Integration into existing lines should not be overlooked. Some organisations might need custom brackets, upgraded applicators or new software configurations. Working with a provider that offers end-to-end support, from consultation through to installation and optimisation, helps to ensure a smooth transition.

■ Future trends in linerless labelling

Sustainability goals across industries are speeding up the pace of adoption of linerless labelling, specifically in the [e-commerce](#), retail and FMCG sectors. Meanwhile, packaging automation continues to advance and linerless labelling is advancing in tandem with it, including the emergence of new materials and adhesives designed for even higher speeds and more demanding conditions.

■ Conclusion

Linerless labelling offers compelling sustainability, efficiency and cost advantages. Although it is not suitable for every single application, its versatility and the operational benefits it offers make it a strong option for firms looking to optimise packaging and labelling processes.

As businesses continue to push for leaner, greener and more resilient operations, linerless labelling is increasingly becoming standard. Partnering with a knowledgeable, specialist provider of linerless print and apply labelling solutions ensures that linerless systems deliver maximum long-term value.

Cobalt specialises in providing intelligent print and apply labelling solutions, including linerless labelling. To find out more about what we can do for your business, get in touch with our team of experts today.

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