



ESSENTRA



**PATIENT  
ADHERENCE  
SOLUTIONS**



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# INTRODUCTION TO PATIENT ADHERENCE





## PATIENT ADHERENCE

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### World Health Organization definition

- Patient adherence describes the extent to which a person's behaviour – for example, taking medication, following a diet or executing lifestyle changes – corresponds with agreed recommendations from a healthcare provider



**World Health  
Organization**

Patient adherence can best be defined as a patient taking their medications according to the prescribed dosage, time, frequency and direction.

A growing body of evidence suggests that medication adherence programs have the potential to greatly reduce health spending and generate significant savings for taxpayers in the process.



## FACTS & FIGURES

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- Packaging can influence patient adherence in many ways, from the information it carries to the overall design and ease of use for the consumer. Such information should be conveyed in a way that is clear and easy to understand, and delivery of which can be enhanced by the available space to communicate these details
- Packaging has the opportunity to improve adherence from a user perspective by providing additional information and detail, to ensure patients have fuller knowledge of their treatment and thus help to avoid misunderstanding
- As pharmaceutical companies look to provide more detail on product warnings, dosage instructions, legal information and ingredients, it is clear that packaging must work to support patient adherence



- Alarminglly this is already a major challenge, for example, research shows that patients not taking their medicines properly costs the UK's National Health Service **£500 million** a year
- Approximately **50%** of patients with chronic diseases in developed countries do not take medicines as prescribed

In 2009, the Network for Excellence in Health Innovation cited poor adherence as one of the “drug-related problems” responsible for up to 13% of the total healthcare expenditure.

Poor medication adherence increases the likelihood of preventable disease progression, increases unnecessary hospitalisations, avoidable doctor and emergency department visits. It is estimated there are up to **\$300 billion USD** a year in costs incurred as a result of patient non-adherence.



## FACTORS THAT CONTRIBUTE TO POOR PATIENT ADHERENCE

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Reasons for patient non-adherence are complex and range from psychological to physical and even to miscommunication through the entire system.



## BARRIERS TO GREAT OUTCOMES

TREATMENT ► **ADHERENCE** ► OUTCOMES



### PATIENT

- Lack of understanding
- Lack of involvement
- Affordability
- Accessibility
- Unclear instructions



### PHYSICIAN

- Complex treatments tailored to patients lives
- Lack of follow up
- Unexplained benefits and implications
- Lack of communication between medical professionals



### HEALTH SYSTEM

- Fragmented/inconsistent healthcare systems
- Prohibitive drug costs/co-payments
- Information not easily available about a patient's history
- Lack of time to engage patients and understand their lifestyles

## CAN PACKAGING HELP?

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According to the World Health Organization, one of the factors that contributes to poor adherence is a lack of knowledge as patients often misunderstand treatment instructions.

Pharmaceutical packaging therefore plays an incredibly important role, given the information it provides that helps patients abide by the proper dosing schedule.



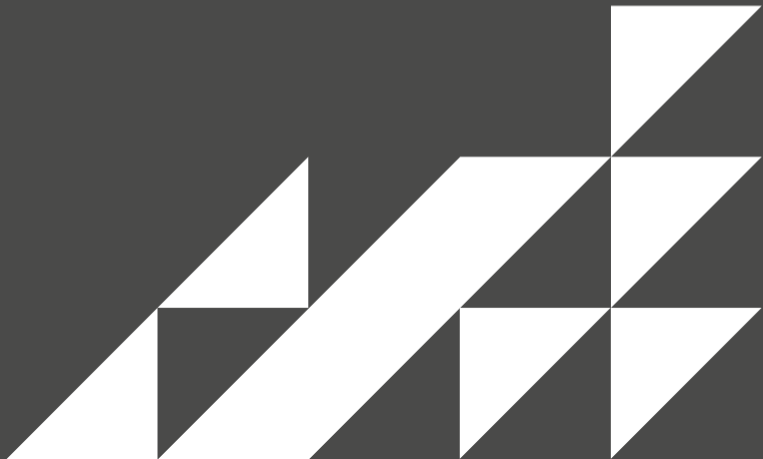
Over two decades of research studies support the use of modern packaging solutions, including patient prompting (also known as compliance-prompting) as a successful option for improving patient adherence.

This leverages the unique characteristics of packaging to help patients better understand how and why to take their medicine.

Scientific data clearly shows that packaging can increase patient adherence to taking medicine correctly as prescribed.

Never before have packaging and manufacturing engineers been in a better position to help their organisation through packaging decisions that drive top-line sales and positive business results, ultimately helping patients reach better health outcomes.

**OUR SOLUTIONS  
START WITH GREAT  
COLLABORATION AND  
INSIGHTFUL DESIGN**



## INTRODUCING THE DESIGN HUB

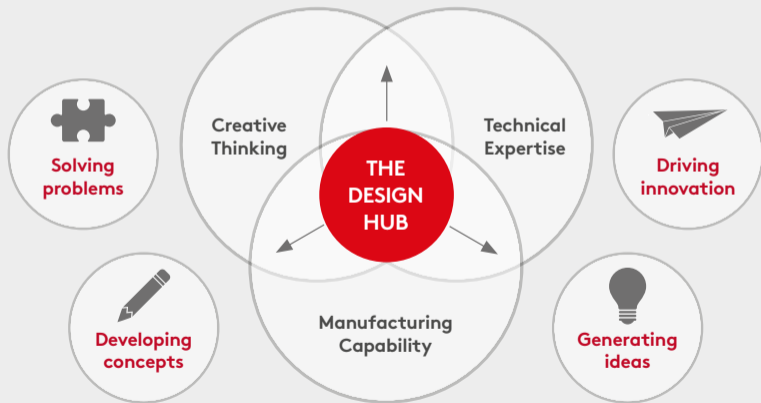
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### Design makes a difference

We have created a design facility that combines the creativity of blue sky thinking with the technical expertise of our development teams to manufacture and supply stand-out packaging that will improve patient outcomes. This is achieved through considered communication structure and other design strategies.







## WHAT WE HAVE DONE

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You have a chance to have a free consultation regarding your packaging design strategy.

**See the inside back cover to discover if you qualify.**



**Alan Davies**  
Global Design Studio Manager

## WHAT WE OFFER

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### A rich and enjoyable creative process



### Delivery of tangible results



Using industry-leading design talent and proven technical manufacturing capability, we ensure quicker time to market, fewer re-loops and deliverable results.



**Product  
development**



**End-to-end  
service**



**Saving time  
and money**



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## NOTES

A series of ten horizontal lines for writing notes. A light gray parallelogram graphic is positioned on the right side of the page, overlapping the bottom three lines.

# ESSENTRA HEALTHCARE



## GLOBAL, END-TO-END HEALTHCARE SOLUTIONS

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We are a global provider of essential healthcare packaging and support services to customers throughout the world.



EUROPE  
& AFRICA



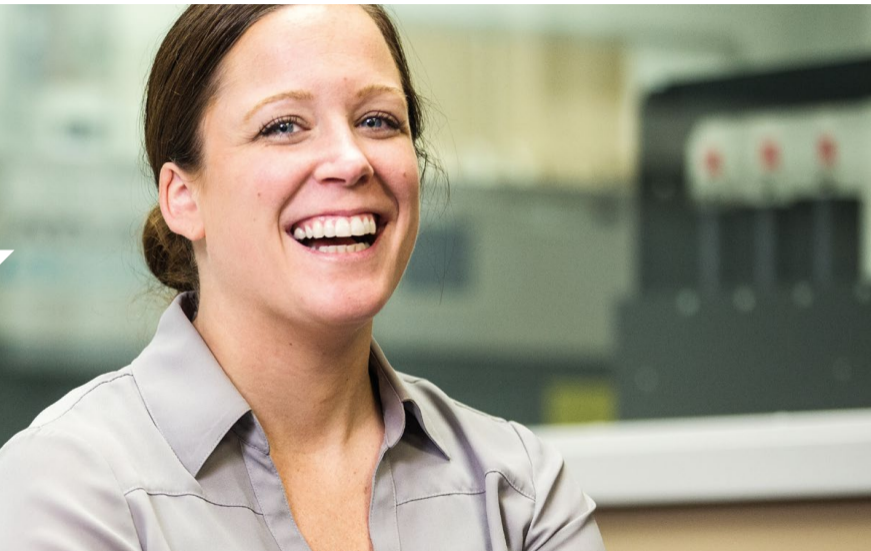
ASIA INC.  
MIDDLE EAST



Working in partnership with both customers and strategic suppliers, we are committed to innovation and meeting the rapidly changing requirements of the healthcare and pharmaceutical sector with a highly flexible, responsive and competitive approach.

We offer solutions end-to-end. Our dedicated studio design team can originate initial pack concepts and graphics, while our production capability encompasses a wide variety of carton, label and literature formats that can include authentication and serialisation in any combination.





# ESSENTRA PATIENT ADHERENCE SOLUTIONS





## OVERVIEW PAGE

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Our packaging solutions for patient adherence include



Cartons



Printed primary packaging

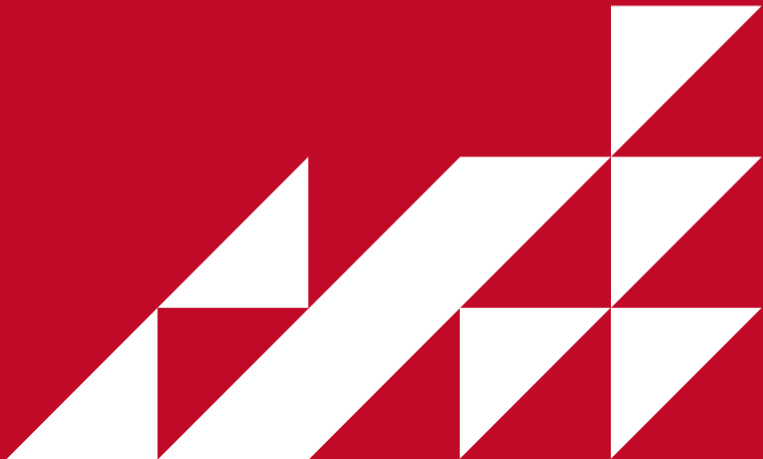


Literature



Labels

# CARTONS



## CARTONS – OVERVIEW

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Driven by customer requirements, we use multiple material substrates including conventional and metallised board.

Our engineering and design team constantly innovate carton solutions and continuously improve our product line to meet specific customer demand for more effective and economical packaging and printing.





## PATIENT ADHERENCE BOX





## Features

Simple and clear graphics to guide patient adherence processes. Particularly useful for cross language communication

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Tamper verification is provided by irreversibly damaging the carton board. It gives consumers clear and visible evidence indicating the packaging has been opened

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A special range of inks that are activated by high or low temperatures to monitor storage conditions

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Enables large volumes of information to be displayed in compliant font sizes to provide additional patient information. The booklet format allows for easy navigation by patients

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Structural packaging to protect content such as vials or medical devices from damage

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## CARTONS – OVERVIEW

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- Carton designs and structural prototypes developed in-house
- Offset print process with both UV and conventional inks; UV and water-based coatings are available
- Computer-to-plate and processing technologies
- Intricate die cutting and blanking
- Specialist gluing solutions
- Printing on both sides of the board





## PRODUCT FEATURES AND OPTIONS

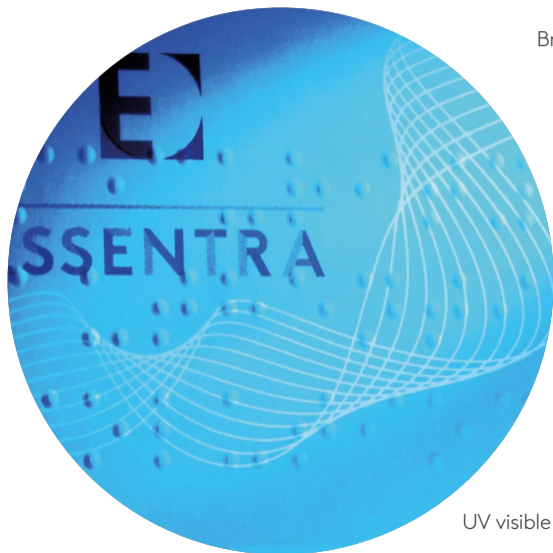
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- Specialist inks and varnishes
- Hot/cold foiling
- Window-patched carton
- Cartons with Braille
- Embossing and debossing
- Micro-perforations
- Anti-theft labels
- Anti-counterfeiting and authentication technologies
- Serialisation



Microtext





Braille



UV visible inks



## CARTONS – COMBOPACK

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- A combination of carton and leaflet
- Suitable for packaging applications that are difficult and/or costly
- Eliminates the need for separate supply streams for carton and leaflet
- Reduced transport costs, as the combined package is produced at the same site



## Benefits

Reduces production and assembly costs

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No compromise to packing line speeds  
or efficiency

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Less pack line maintenance

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Fewer SKUs

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## CARTONS – TAMPER EVIDENCE GLUED CARTON

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Essentra's tamper-verification solution is glued by our customer at the point of product packaging, which mean cartons do not require additional tamper-evident features such as labels.

Irreversible tamper verification is created by tearing the carton or designed perforations to open.

### Features

Optional re-close function

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Overt and covert authentication technology available

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## PARENTERAL PAPER PACKS (PPP)

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Designed for fragile products such as vials, bottles, ampoules and syringes, Parenteral Paper Packs (PPP) are an important environmental packaging innovation. Made of 100% recyclable carton board instead of plastics.

IMA SAFE packaging equipment is used to erect the container, tray or display box then pick 'n' place systems lock items in place inside the boxes. PPP use cheaper materials than standard, require lower manufacturing precision and are extremely stable, enabling high-speed handling.



## **Quality commitment**

Each of our production facilities satisfies GMP compliance and customer expectation. Our global distribution, independent supply chains and high-specification manufacturing technology make for industry-leading product capability and world-class delivery.



## Benefits

Made from recyclable carton board

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Product 'locked' into tray for complete stability and security

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Suitable for high-speed lines

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Significant cost savings versus traditional solutions

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Tamper evidence by means of pre-cut label or paper foil

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Adaptable to new product configurations

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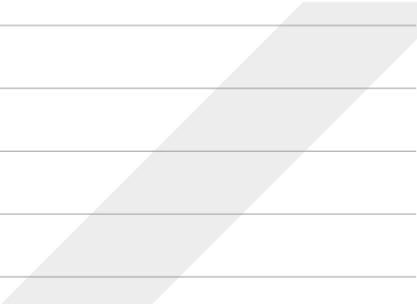
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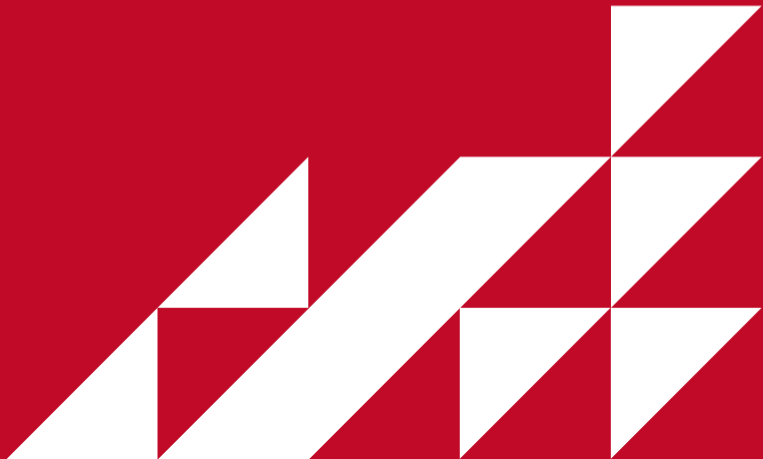
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# LITERATURE





## LITERATURE – OVERVIEW

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Our healthcare literature come in a range of sizes and different formats: folded, flat and on-roll. Leaflets are printed on both reel and flat-sheet offset litho presses for pack insertion on high-speed lines.

Booklets can be multipage, multicolour and perfect bound in a range of sizes to suit your requirements.

We employ state-of-the-art inspection, defect detection and tracing equipment to ensure consistent quality and text matching to customers' requirements.





## LITERATURE – OVERVIEW

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- Flat leaflets
- Parallel/cross folded
- Glued outsert or tagsert folded leaflets
- Multi-unit, multipage, leaflet combinations such as Piggyback®
- Reel format options: simple reel; double, triple and quadruple pre-folded leaflets (PFL)
  - ideal for very high-speed cartoning lines with in-house leaflet folding
- Booklets





## LITERATURE

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We use advanced printing and folding technology to produce high-quality patient information leaflets in a wide variety of formats and finishes as folded, flat or on-roll (single, double, triple and quadruple).

Our specialist product range, made to customer specification, includes pure parallel fold, wallet parallel fold, open-edge cross fold, outserts, spotglued leaflets, tagserts and booklets.

We offer innovative leaflet formats including Piggyback<sup>®</sup>, which are folded leaflets glued together back to back to provide maximum printing space in a compact design; and Plurium<sup>™</sup>, a multipage folded booklet offering separate sections for different audiences and languages.



## Features

Printed on web or flat sheet offset litho presses

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Wide range of substrates

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Single and multicolour options

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Larger sizes available

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In-house graphic design studio

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Our solutions include folded, flat, on-roll (single, double, triple, quadruple)

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## BOOKLETS / LEAFLETS – PLURIUM™

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Our Plurium™ products enable large volumes of information to be displayed at compliant font sizes, and are available in either flat or folded formats.

Both formats comprise up to six sheets (12 printable faces) glued at the spine, which can be colour coded to highlight different sections, languages or audiences.

The leaflet format can be supplied as pre-folded with different dimensions and page counts including parallel, cross and VIJUK-folded, tagsert or outsert using up to 50gsm stock.

The Plurium™ booklet can feature a carton board cover.



## Booklet / leaflet benefits

Easy navigation

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Carton board cover

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Permanently or temporarily fixed  
inside packaging

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Allows large volume of information

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Works with existing  
insertion technology

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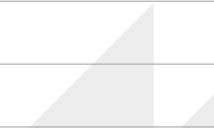
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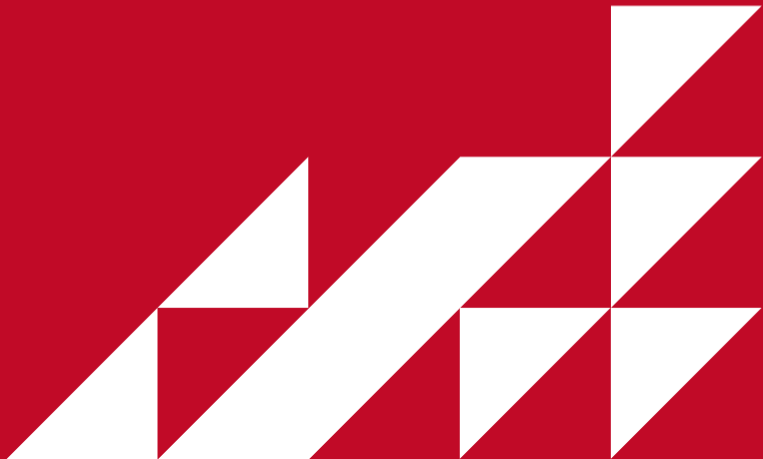
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# LABELS



## LABELS – OVERVIEW

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Our self-adhesive healthcare label products are manufactured to specific customer requirements and supplied on a roll for automated high-speed application.

They can be produced on a wide range of substrates including plastic films, paper and laminate materials for applying to a range of different containers.

Technical support ensures the right adhesive is selected for permanence or ability to reposition and tamper evidence, while our Label Vision Systems check for label print accuracy. Our stringent systems ensure 100% control from origination to final production.







## LABELS – OVERVIEW

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Our solutions include

- Leaflets, booklets and syringe labels
- Peel 2 Read labels
- Peel and reseal labels
- IV hanger labels
- Clear-on-clear labels
- Braille
- Sequential back-numbering
- High-speed data replication

### Security features

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Holograms

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Security print

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Tamper evidence

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## THERMOCHROMIC INKS

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A special range of inks that are activated by high or low temperatures.

### **Benefits**

Ability to set the temperature range for activation to suit your specific needs

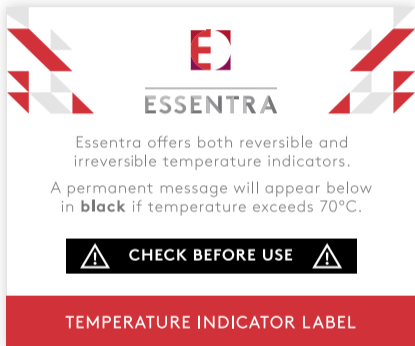
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Use for particular purposes to caution healthcare professionals or patients that a product has been subject to temperature extremes outside the recommended levels

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## THERMOCHROMIC LABEL EXAMPLE

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## LABELS – EXTENDED CONTENT LABEL

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For healthcare packaging that must carry lots of information, Essentra has a solution. Our pressure-sensitive, multipanel extended content labels, leaflets and booklets and Peel 2 Read labels provide extra space for instructions, translations, legal text and ingredients. They offer production efficiency, helping to reduce handling and eliminate mislabelling.

Manufactured in a GMP environment designed for servicing the needs of the healthcare market, our labels can be tailored for your specific application.

Essentra designs and manufactures market-leading innovative label solutions for many international pharmaceutical, healthcare, medical device and clinical trial companies.



## Benefits

Ideal for pharmaceutical product warnings and dosage instructions

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Useful for clinical trials where multiple languages are needed

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No need to buy additional leaflets

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Suitable for product tracking

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Wide selection of adhesives and face stocks

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Maximises printable space without the need for increased surface area

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Reseal functionality maintains aesthetic appeal

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Option of a fully laminated top layer keeps the information contained protected against harsh environments or spillage

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Up to 64 faces for leaflet labels although for eight or more faces we suggest a booklet label

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## LABELS – PEEL 2 READ LABELS

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Peel 2 Read labels incorporate multiple layers providing up to seven printable faces, ensuring all information can be provided even where there is limited surface area.

User-friendly easy-peel adhesive allows access to each printed layer.





## Benefits

Increases printable faces without compromise to design

- 2 ply = 3 printable faces
- 3 ply = 5 printable faces
- 4 ply = 7 printable faces

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Option to incorporate a finger lift to further aid access to each layer

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Re-seal functionality maintains aesthetic appeal

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Multiple print colours possible on all faces

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Available in a variety of shapes and sizes

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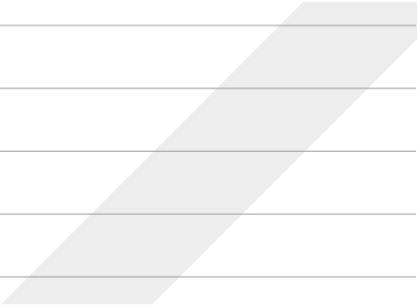
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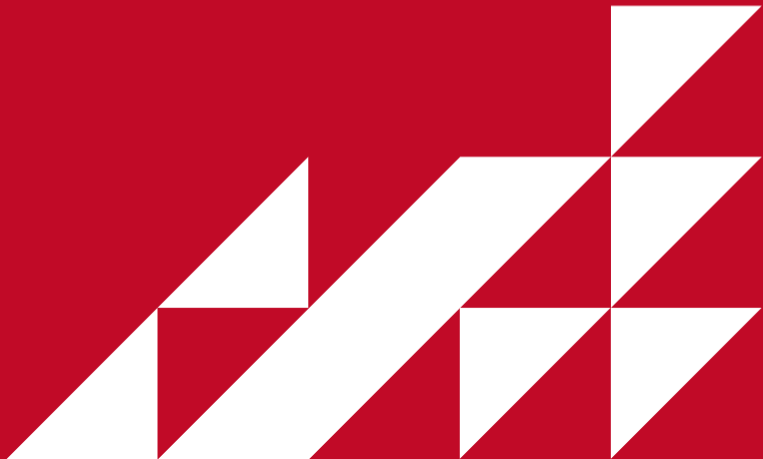
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# PRIMARY PACKAGING SOLUTIONS



## PRIMARY PACKAGING – OVERVIEW

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Essentra's printed decoration solutions for blister foils and Cold Form material meet pharmaceutical quality requirements and high-efficiency packing demands for primary packaging.

The multisite platform provides the highest levels of conversion flexibility with reduced minimum order volumes (as low as 5kg) and quick turnaround times together with supply and contingency planning reassurance for our clients.

A portfolio of base material, from multiple established suppliers, is available to deliver the required product protection and ease of opening as well as conforming to regulation. Experienced technical support is available to deliver a tailored solution across a number of platforms.





Printed foil options include  
push-through, peel-push,  
tear-open, peelable and  
child-resistant formats



- Flexographic print
- In-house graphic design service
- Anti-counterfeiting options
- Regulatory and pharma  
GMP compliant produced in  
a clean room environment  
(ISO 14644-1 Class ISO 8)
- Ink specification enables us to  
print on the polyamide surface  
of Cold Form material

## **Medical paper**

Medical Paper Kraft

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## **Printed blister foil and Cold Form**

Standard 20-micron foil

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Standard 25-micron foil

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Peel-off foil

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Child-proof foil

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Printed Cold Form

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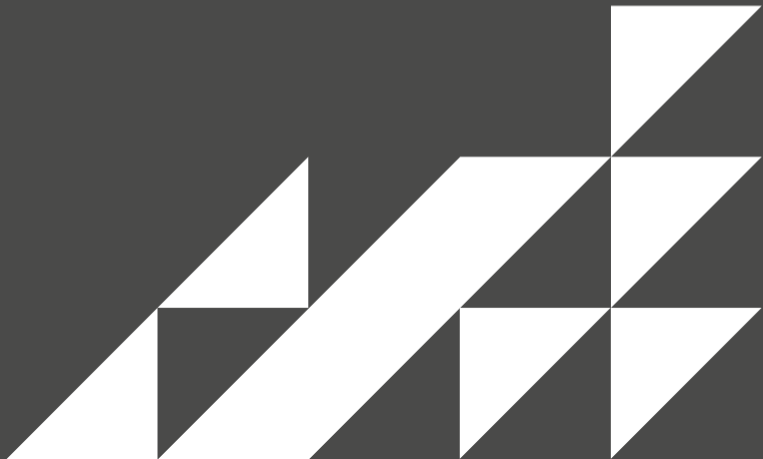
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# ABOUT ESSENTRA



## WE ARE ESSENTRA

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We are global manufacturers and distributors of vital component parts for hundreds of markets and thousands of products. We're proud of what we do and believe that even the smallest products have a big part to play.

## GLOBAL REACH WITH A LOCAL TOUCH

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As a global player we bring together the best products, ideas and distribution in one unrivalled package for your business.

Whether you have a global or local perspective, our combined reach and collective insight creates solutions designed specifically for you.







## LITTLE THINGS MAKE A BIG IMPACT

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Essentra provides the small yet vital components that are everywhere. These little things make the world go round. And we help it to go round smoother, smarter and faster. By being better made. By getting there on time. By solving complex problems.





We're a FTSE 250 company, with a global reach and a local understanding. Thousands of customers in healthcare, food & drink, transport and heavy industries rely on our solutions every day.



Our three  
geographic  
regions span

**33**

countries

**C.8,000**

employees

**49**

principal  
manufacturing  
facilities

**4**

R&D  
centres

**70<sup>+</sup>**

year heritage

## NOTES

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**Scratch to reveal if you have  
won a consultation with  
our Global Design Hub**

**YOU ARE A WINNER**

Contact  
[thedesignhub@essentra.com](mailto:thedesignhub@essentra.com)



Discover more at  
[WWW.ESENTRA.COM](http://WWW.ESENTRA.COM)

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