



ESSENTRA

MEDICAL DEVICES

**SHAPING
ESSENTIAL
SOLUTIONS**





HELPING YOUR BUSINESS WORK BETTER

AMERICAS

Whatever your particular need, Essentra has a solution.

Working with you, we bring together the best products, ideas and distribution in one unrivalled package. Our reliable service and global capability means that we deliver – wherever, whatever, however.

Little things make a big impact

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.

EUROPE

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.

ASIA PACIFIC

Our global reach extends to

33

countries across three regions, shipping to more than 75 countries

A UNIQUE SOLUTION

Tell us your requirements and our Customer Solutions Model will identify your key priorities across a range of business areas including product or process improvement and innovation, increasing brand loyalty and engagement, reducing cost and waste, and ensuring supply base security.

OUR CAPABILITIES

As global manufacturers and distributors for multiple markets, our cross-sector capabilities not only meet these immediate needs, they open up opportunities. We go beyond our brief and create category-changing ingenuity.

FROM CONCEPT TO CONSUMER

We are experts in speciality plastic, fibre, foam and packaging components, which means we can provide a complete end-to-end service while adding value and maximising efficiency.

5

R&D centres

69

principal
manufacturing
facilities





MEDICAL DEVICES

Superior healthcare products and equipment help achieve the best patient outcomes. And precise fluid and vapour handling is often essential. Our products and components enable safe and reliable procedures – improving the quality of care and even saving lives – from pharmaceutical drugs delivery to critical environment disinfection.



PACKAGING SOLUTIONS

We create packaging products with value built in. Our tapes, cartons, leaflets, digitally printed labels and security features are designed to become an integral part of your product packaging experience, while creative design and print provide outstanding brand communication and protection.



POROUS TECHNOLOGIES

We make a range of polymer particles fused together for specific mechanical and chemical purposes. Components can vary greatly in porosity, permeability, flexibility and strength while additives enable self-sealing, colour and hydrophilicity to further enhance performance.



PRODUCT DEVELOPMENT

We collaborate with you to deliver the right result for your business. Essentra's Customer Solutions Model drives product development through four key phases.

Phase one

Your needs

We start by understanding your requirements for components and packaging.

Phase two

Our expertise

We then evaluate the challenge and offer tailored solutions.

Phase three

Custom engineering

We apply our material science through custom engineering and collaborate with you through the following stages:



1. Prototypes
2. Customer evaluations
3. Modifications and enhancements

Phase four

Superior quality

Essentra delivers. Our rigorous production process and high standards ensure that every part, component or assembled unit offers the same great quality no matter what the quantity.

PACKAGING SOLUTIONS

Your customers want packaging that's easy to open and shows tamper evidence. Our products are made to meet these needs and your particular brief. And we go beyond user-friendly and secure specifications. We also produce striking designs and unique finishes to enhance branding and overall appeal.

Parenteral Paper Pack (PPP)



ComboPack™



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

Anti-theft labelling

Anti-counterfeiting and authentication technology

CARTONS

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

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

We produce cartons for specific products, which include Parenteral Paper Pack (PPP) and ComboPack™.

PARENTERAL PAPER PACK (PPP)

A board tray designed to hold and protect fragile parenteral components such as pre-filled syringes, glass vials or ampoules.

COMBOPACK™

Pre-assembled leaflet attached inside or outside the flat carton, removing the need for in-line insertion equipment. This also overcomes technical insertion issues arising from large-format patient information leaflets.

**Board trays for fragile
parenteral containers**

Specialist inks and varnishes

Hot / cold foiled

Window-patched carton

Cartons with Braille

Embossing and debossing

Micro-perforations



Carton and label combination
for tamper-evident and
authentication features



Board trays for
fragile parenteral
containers



Serialisation
carton

LEAFLETS

Our healthcare leaflets 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.

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



Plurium™



Vijuk sheet leaflet

We offer a comprehensive range of special products including outserts, spot-glued leaflets, tagserts and other innovative formats. These include the Vijuk sheet leaflet and Plurium™.

PLURIUM™

A multipage folded booklet with separate sections for improved consumer communication. It can accommodate different page-colour backgrounds and languages.

VIJUK SHEET LEAFLET

Comprises twofold or threefold leaflets glued together back to back to provide maximum communication space in a compact design.



Parallel / cross folded

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

Flat leaflets

Parallel / cross folded

Glued outsert or tagsert folded leaflets

Multi-unit, multipage leaflet combinations such as Piggyback®



Reel format

LABELS

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, repositionability and tamper evidence, while our Label Vision Systems check for label print accuracy. Our stringent systems ensure 100% control from origination to final production.

Paper, laminates, film and synthetic substrates (PE, PET, PP, PS, vinyl)

Adhesive / reverse printing

Braille

Clear-on-clear labels

Sequential back-numbering



PHARMA-SLING®

A pressure-sensitive label with an additional ply of clear over-laminate to allow for container or device hanging.

- Replaces the plastic hanger and / or traditional sling
- IV bottles hang vertically
- Decreased inventory by reducing the complexity of different hanger formats



EXTENDED-CONTENT LABEL

Pressure-sensitive multipanel label.

- Perfect for pharmaceutical product warnings and dosage instructions
- No need to buy additional leaflets
- Ideal for product tracking
- Wide selection of adhesives and face stocks



Labelling solutions to deliver tamper-evident requirements. Security features include holograms, security print, void release and extra security slitting.



PEEL 2 READ LABELS

A simple two- or three-ply peel-back label that allows for extended text on the pack, such as instructions, multiple languages, legal information and ingredients. It makes important details easily accessible to the consumer.



PEEL AND RESEAL LABELS

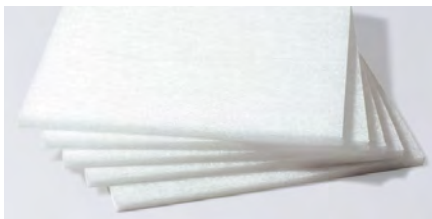
Peel and reseal labels work in the same way as Peel 2 Read labels but have re-closing capability so they can be resealed again and again throughout the life of the product.

POROUS TECHNOLOGIES

Medical diagnostic devices need components – both common and highly specialised – to work effectively. Often hidden from view, our small parts help make surgical procedures safer and hundreds of other functions possible.

ESSENTIAL MATERIALS

Essentra continuously tests the limits, and our engineers take those advancements to our customers. We collaborate on design, prototypes, modifications and product samples offering unrivalled consistency and quality using a range of materials.



FOAM

A proprietary or customised blend of raw materials created through a clean hydrophilic polyurethane process. Each formulation creates a range of densities, porosities and softness. Converting, roll stock and laminations are available where applicable.

- Foams include medical grade (ISO 10993 and ISO 13485 certified), cosmetic, slow recovery and a foam-fibre hybrid material
- Catalyst free, hypoallergenic, 100% latex free and skin-contact friendly
- Hydrophilic or hydrophobic
- Can incorporate customer exclusive additives
- Skived or poured to thickness



FIBRE

A blend of polymeric fibres bonded together for ideal fluid-handling capillary structures. Pore size, density, and materials vary while component performance can be further optimised by impregnating structures with active ingredients, such as activated carbon, zeolites, cyclodextrin complexes, pigments, surfactants, reagents or concentrates.

- Materials include polyester, polyolefins, nylon, cellulose, acetate and other fibres
- Pore sizes range from 2 microns to greater than 100 microns
- Chemical- and high-temperature resistant
- Hydrophilic or hydrophobic
- Customised three-dimensional shapes, colours, roll stock and die cutting



POROUS PLASTIC

We make a range of polymer particles fused together for specific mechanical and chemical purposes. Components can vary greatly in porosity, permeability, flexibility and strength while additives enable self-sealing, colour and hydrophilicity to further enhance performance.

- Materials include a range of polymers, such as polyolefins, polyamids, acrylics and styrenics
- Pore sizes range from 5 microns to greater than 250 microns
- Hydrophilic or hydrophobic
- Porosity ranges from 30% to 70%
- Customised three-dimensional shapes, colours, roll stock and die cutting



ESSENTIAL FUNCTIONS

Absorption

Evaporation

Filtration

Repellency

Controlled release

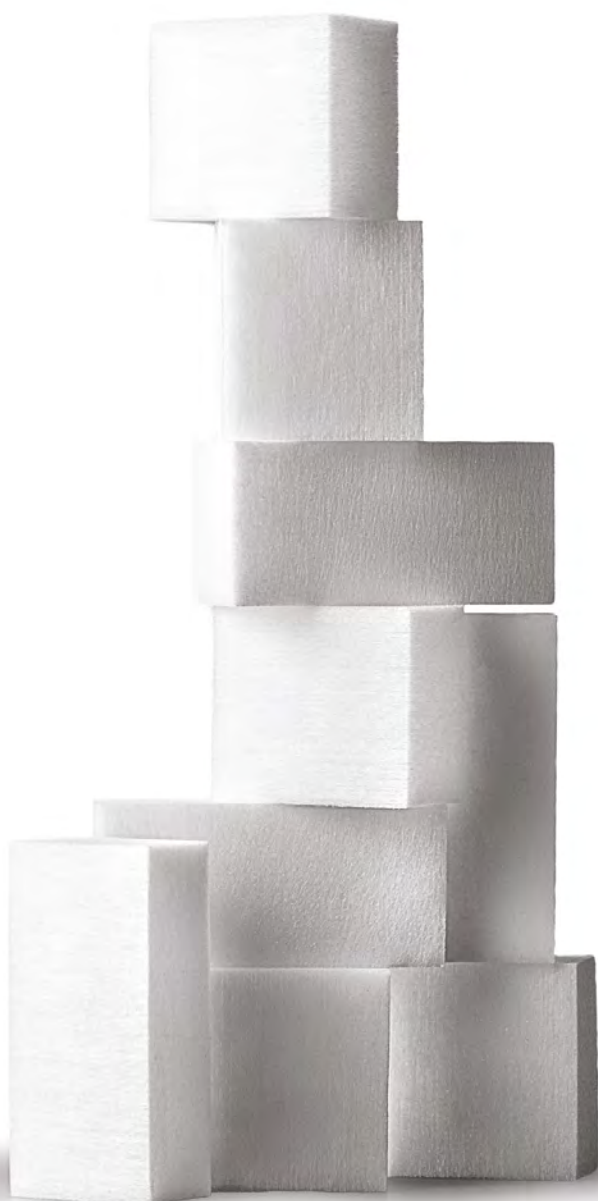
Functional separation

Venting

Wicking

Performance optimisation

Contamination control



LABORATORY & DIAGNOSTICS

Every day, Essentra products and components prove invaluable to human and animal health research in laboratories across the world. Advanced genetics depend on our DNA / RNA purification media for accuracy while forensics rely on our swabs and media for dependable sample collection and testing. And we continuously develop new solutions to help the life sciences industry.



LATERAL FLOW ASSAY WICKS

Wicks can meet any lateral flow requirement, combining highly customisable capillary action and industry-leading manufacturing techniques through innovations such as proprietary colour-change technology.

PIPETTE FILTERS

Pressure-drop-optimised pipette filters offer improved airflow uniformity with hydrophobic protection against contamination and are easy to assemble.



DIAGNOSTIC MEDIA

Ultra-pure production prevents contamination for customised diagnostics used in DNA / RNA purification, urine and saliva collection, forensics, and more. In addition, proprietary coatings help minimise non-specific binding and reduce potential sample infection.



FORENSIC MEDIA

Enabling an array of both presumptive and confirmatory forensic tests, these media can be relied on for precise accuracy because of our commitment to quality control.

CLEAN WIPES

Clean rooms and critical environments have relied on Essentra's speciality wiping products for more than 40 years. Having complete control of our state-of-the-art manufacturing process ensures superior quality at competitive prices. We offer diverse wiping solutions in contamination control including a wide array of substrates that can be chosen based on sealed-edge requirements, purity levels, sterilisation needs and multiple packaging options. Nearly all our products are fully customisable.

Non-woven wipes

Irradiated wipes

Knitted wipes

Speciality wipes

Polyester knit wipes

Sterile alcohol spray

Presaturated wipes

Clean room bond paper



POLYESTER KNIT WIPES

For meeting the highest clean room requirements, we offer Extreme Clean® wipes that deliver ultra-low extractables and ultra-low particle generation, purity wipes with exceptional absorbency and cleanliness, and our economical 3000 Series wipes.



ECO-FRIENDLY WIPES

Our wide range includes the revolutionary G7 100% cotton wipe made from sustainable fibres, naturally pure Bemcot® wipes that can be used with a variety of solvents, and biodegradable one-ply tissues, which are perfect for light cleaning.



PRESATURATED WIPES

Ideal for critical environments where wet wiping is required, isopropyl alcohol presaturated wipes are additive free, with very low levels of sodium and other ions, and packaged in resealable containers to reduce contaminant exposure.



VALIDATED STERILE WIPES

Providing utmost sterility for pharmaceutical and biotechnological processing environments, our wipes – available as presaturated and dry – deliver an optimal final product. Some grades can be pre-packaged in autoclavable bags for sterility procedures and most types can be gamma irradiated for reliability.

MEDICAL & SURGICAL DEVICES

Essentra's commitment to important healthcare research and development means we are always evolving the role that porous media plays in life-saving operations. From the release of pressure in surgical devices to the comprehensive treatment of wounds, our products and components enable safe and reliable medical procedures.



MEDISPONGE® WOUND CARE

Advanced hydrophilic, polyurethane foams feature ultra-pure formulations and optimised absorptive capacities that enhance patient care and enable faster healing.

Ideal for a variety of healthcare applications, our medical-grade foams and fibre composites are customisable for specialised wound care performance.

- Custom additives
- Porosity
- Density
- Tear strength
- Tensile strength
- Softness



NEBULISER FILTERS

Maximised filtration efficiencies and high material purity protect nebuliser machines from particles harmful to internal mechanisms, ensuring that users receive effective treatment from their equipment.

VENTING COMPONENTS

Various porous material technologies create bespoke surgical equipment venting solutions that can be further optimised through active ingredients and custom additives.



SURGICAL ABSORPTION MEDIA

Precision-engineered absorption elements range from absorptive components specially fitted for specific surgical devices to super-absorbent surgical pads, all customisable for any specialised application.

DRUG DELIVERY RESERVOIRS

Featuring pure porous materials with high chemical resistances to store liquid pharmaceutical agents then release them on demand, drug delivery reservoirs are used for direct patient administration or in combining multiple drugs.



SUCTION CANISTERS

Specially formulated porous plastic suction canisters enable high airflow rates, while a uniform additive increasingly swells on contact with any aqueous liquid, protecting sensitive surgical equipment from liquid contaminants.

SECURITY AND AUTHENTICATION

Your brand, products and consumers need protecting. So we work with you to provide that reassurance and deter counterfeiters. From the simplest interference evidence to the most sophisticated authentication technologies, we have it covered.

THE BIGGER THE RISK, THE SMARTER OUR SOLUTION

We offer different levels and types of security dependent upon the potential risk and method of counterfeiting. Essentra advocates layering solutions to offer the highest form of protection to brands and consumers.

SECURITY SEALS



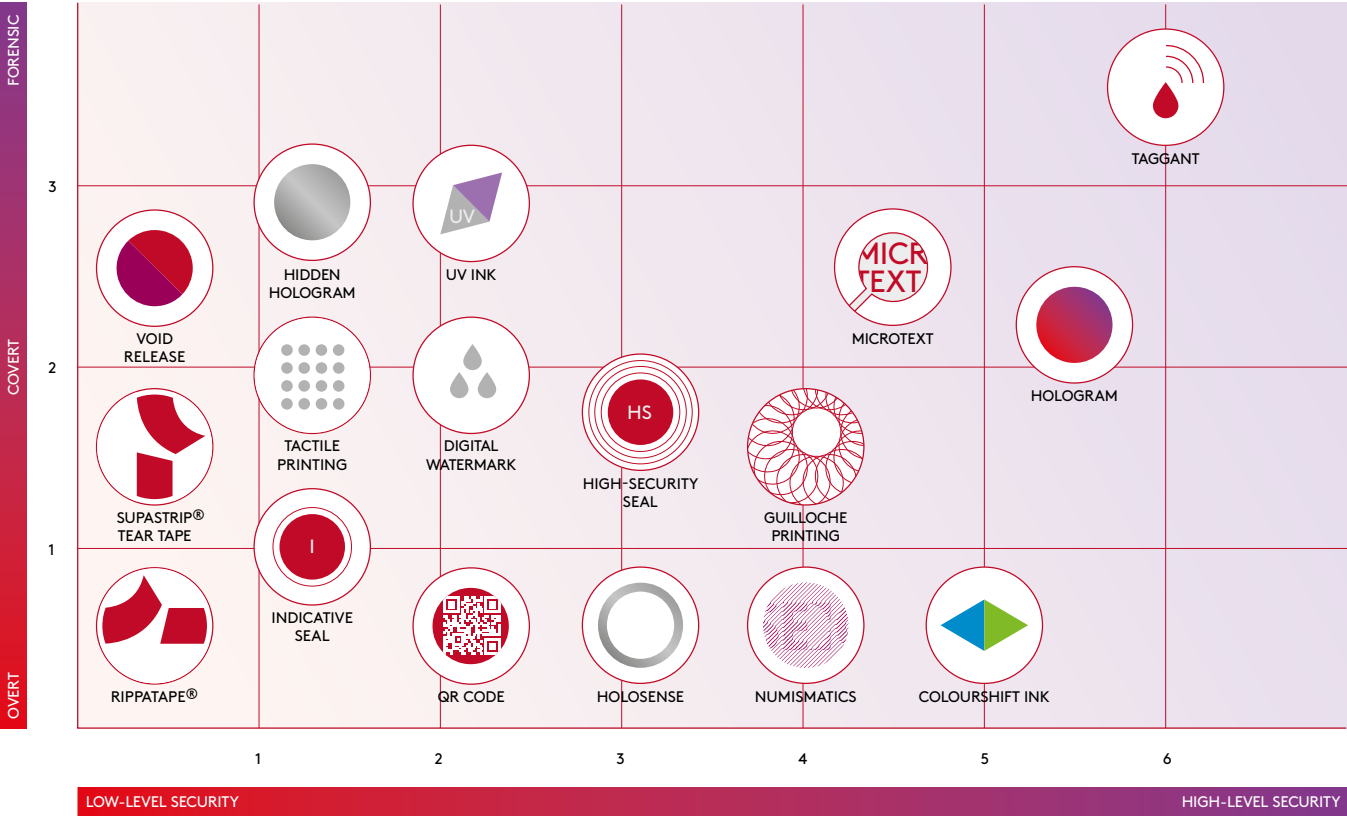
HIGH-SECURITY SEAL
Made of material such as metal or metal cable that aims to delay intrusion. **Example:** barrier seals.

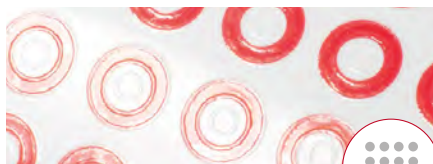


SECURITY SEAL
Made of material that provides limited resistance to intrusion and requires lightweight tools for removal. **Examples:** fixed length seals, variable length seals.



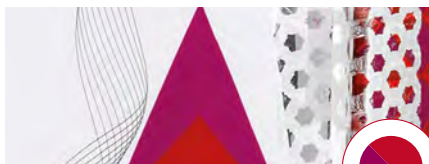
INDICATIVE SEAL
Made of material that can be easily broken by hand or by using simple snipping tools. **Example:** special purpose seals.





TACTILE PRINTING

A method of laying down thick varnishes to give a textured effect in relief and also to make packaging more difficult to copy.



VOID RELEASE

Peeling or removal of the label will leave telltale traces of residue on the pack to show it has been opened.



HIDDEN HOLOGRAM

Provides clear evidence of tampering by leaving behind a holographic effect enabling authentication for brand protection.



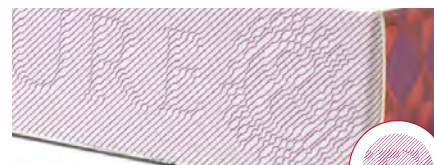
QR CODE

Instantly recognisable feature offering customer engagement.



DIGITAL WATERMARK

More covert than a QR code, digital watermarks can be incorporated into a design without using up brand space.



NUMISMATICS

Provides a wide range of parameters that make the final look difficult to copy. Designs can be raised or inverted.



HOLOSENSE

Decorative holographic effect that can be applied to packaging adding an extra layer of security.



GUILLOCHE PRINT

Complex patterns plotted according to mathematical principles that are extremely difficult to counterfeit. Generated using specialist software.



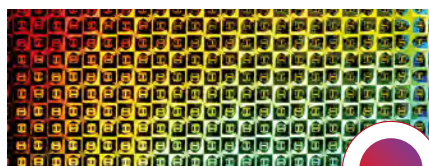
MICROTEXT PRINT

Minuscule characters that cannot be seen by the naked eye and can therefore be hidden within larger overt images.



COLOURSHIFT INK

Inks appear as two or more distinct colours when viewed from different angles. A wide range of different combinations is available.



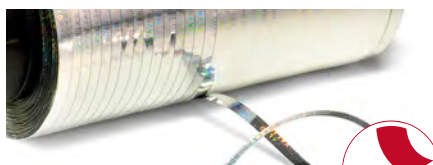
HOLOGRAMS

Primarily used as first-level identification devices and to enable authentication. Features such as nanotext and hidden images can be used as second- and third-level techniques for trained and equipped specialists.



UV INK

Inks only visible under a special light. Our sophisticated printing capabilities enable images and text to be printed in a variety of UV colours.



TEAR TAPE

Our tapes can create easy-opening, informative, tamper-evident and shelf-ready solutions. Security features, including overt and covert options, and up to 10-station printing can also be incorporated.



SECURITY SEALS

A fast, obvious way to recognise tampering or unauthorised access to keylessly sealed items. We offer a vast range of seals for diverse markets.



PATRON® TAGGANT

A closed loop, lock-and-key solution, using patented reader technology to authenticate the strictly controlled Patron® Taggant security ink.



ESSENTRA