

**Termax**



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MOVING WITH YOUR BUSINESS

# TERMAX

Termax is Lecta's range of heat-sensitive papers designed specifically for direct thermal printing.

This product line is the result of deep technological know-how and years of experience in manufacturing specialty papers.

Thanks to Lecta's industrial structure with a high level of production integration, Termax meets the demands of a growing and moving market in keeping with the highest quality standards and the most rigorous environmental requirements.

Converters and pressure sensitive adhesives manufacturers from around the world use Lecta's Termax papers, ensuring efficient service in terms of logistics, technology and products.



# LECTA TODAY

## PAPERS FOR EVERY NEED

An extensive sales network and a wide range of diverse, environmentally responsible and innovative products make Lecta a major global supplier of paper solutions.

Lecta is one of the leading European manufacturers and distributors of specialty paper for labels and flexible packaging, coated and uncoated paper for publishing and commercial printing,

along with other high value-added printing media.

With a production capacity of 1.7 million tons and turnover around 1.4 billion euro, Lecta produces pulp, base paper and finished products with state-of-the-art technology. An integrated production system and technological expertise are key to our operations, which are carried out prioritizing excellent environmental performance.

Lecta is a multinational group with 3,100 employees and seven modern mills in Spain, France and Italy. Present in the most demanding international markets, Lecta has its own sales offices and merchants in 10 countries: Spain, Portugal, France, Italy, United Kingdom, Germany, Belgium, United States, Morocco and China.

# INNOVATION AND RESEARCH & DEVELOPMENT

With two Research & Developments centers and a team exclusively devoted to innovation and developing new product features, Lecta is continually looking for ways to provide even better paper solutions for its partners.

Lecta's goal is to develop new high value-added products to extend its leadership to various growing market segments. In recent years, Lecta has significantly expanded its range of specialty papers and has launched a number of new products.



# THERMAL PAPER KNOW- HOW INTEGRATED PRODUCTION AND PRODUCT EXPERTISE

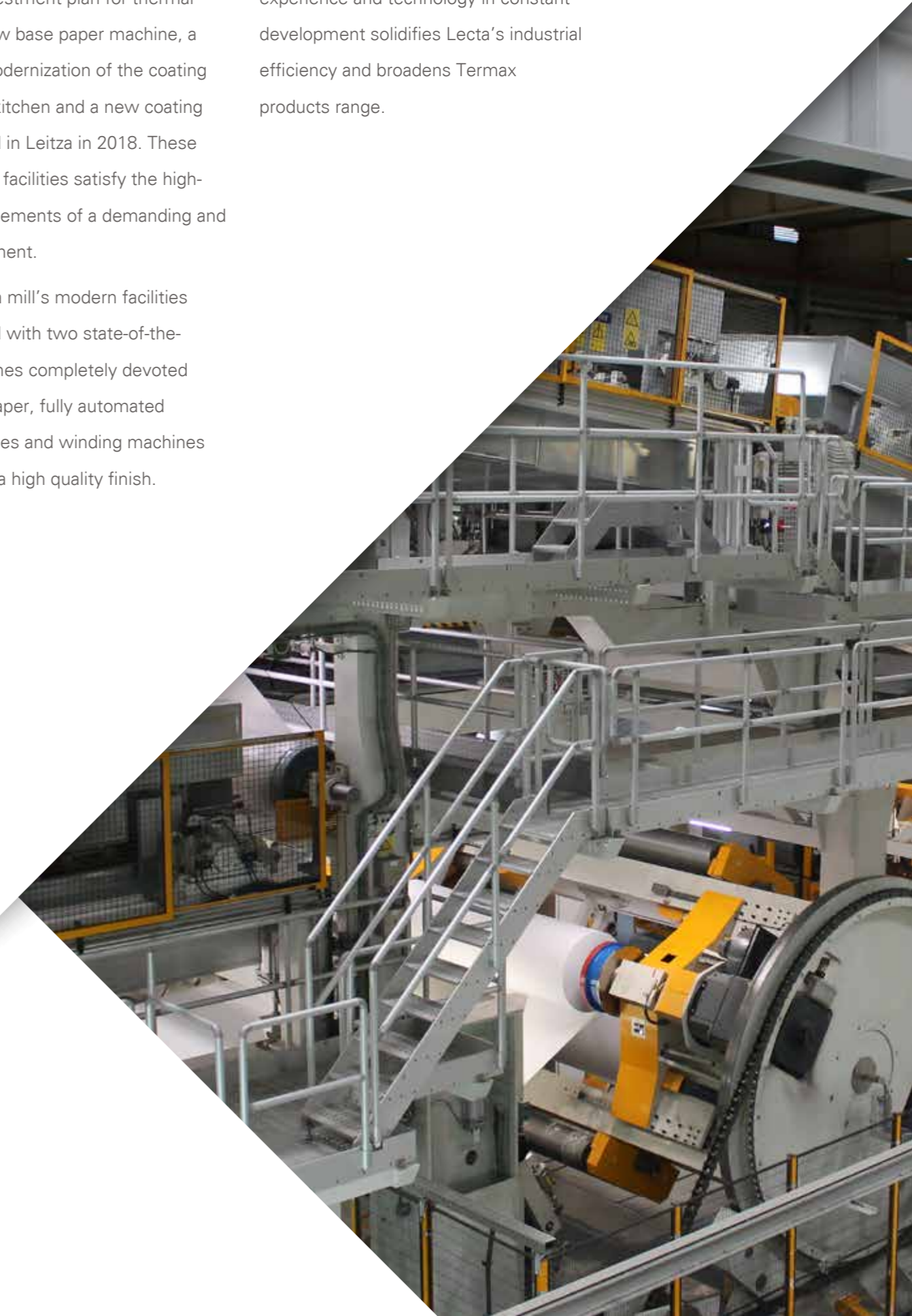
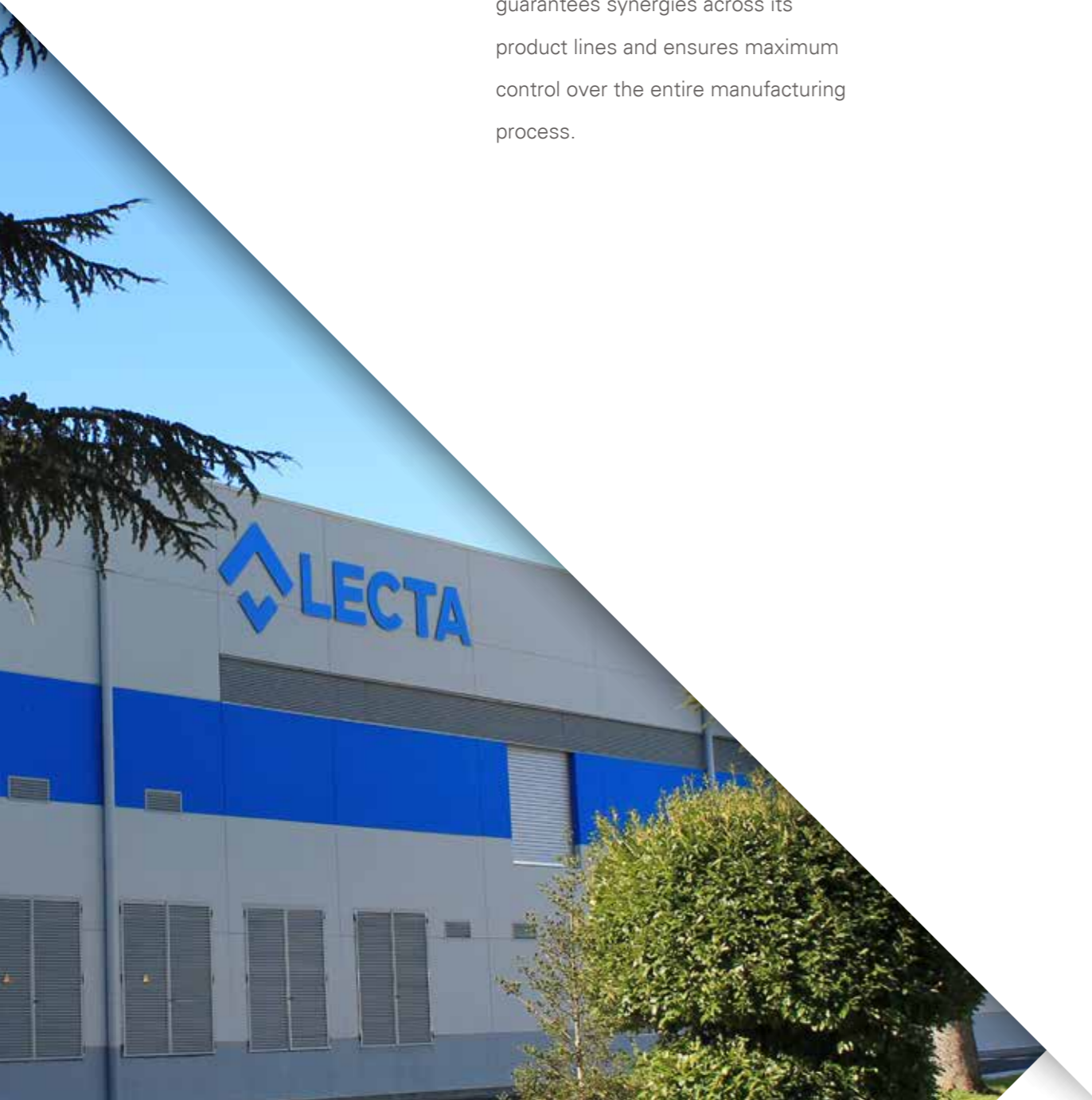
Full Termax range is produced in Leitzta (Spain) mill since 1991. Base paper is also manufactured by Lecta, using its own pulp. This integrated production provides Lecta with an extensive and high added-value products knowledge, guarantees synergies across its product lines and ensures maximum control over the entire manufacturing process.

## MOVING WITH THE MARKET

Over the last years, Lecta achieved a strategic investment plan for thermal papers: a new base paper machine, a complete modernization of the coating preparation kitchen and a new coating line, installed in Leitzta in 2018. These new thermal facilities satisfy the high-quality requirements of a demanding and moving segment.

Today, Leitzta mill's modern facilities are equipped with two state-of-the-art coating lines completely devoted to thermal paper, fully automated packaging lines and winding machines that provide a high quality finish.

The combination of knowledge, experience and technology in constant development solidifies Lecta's industrial efficiency and broadens Termax products range.



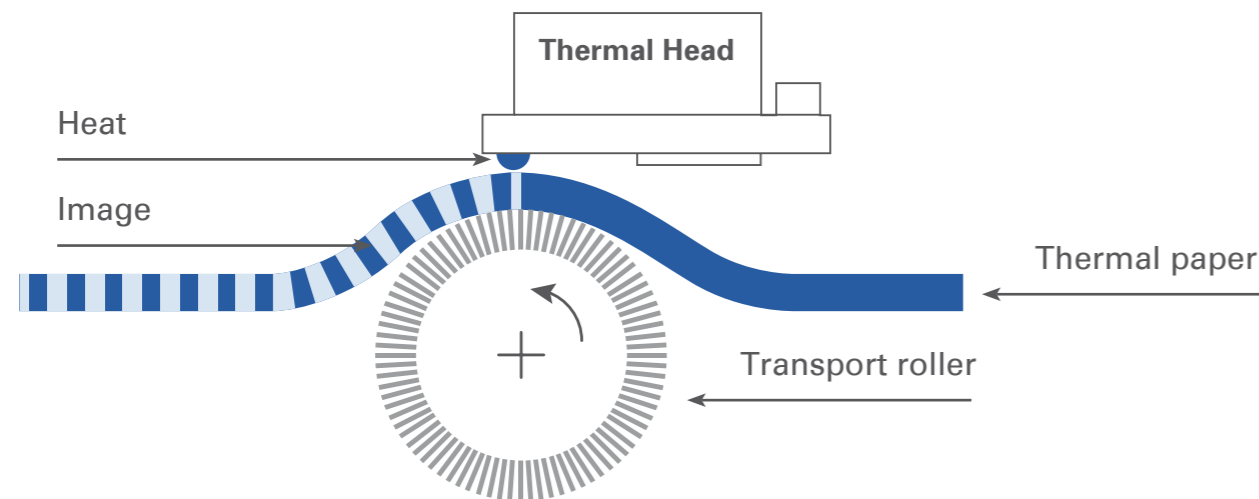
# THERMAL PAPER TECHNOLOGY

The high-quality standards of Termax papers guarantee perfect thermal direct printing results and numerous advantages.

## DIRECT THERMAL PRINTING

In the thermal printing process, the image is created by direct heat transmission to the chromatic reagents of thermal paper. The thermal print head is composed of numerous heating elements that emit heat when electronically activated.

The heat activates the thermocoating of the paper, which changes colour where heated, producing the printed image.



## HIGHLIGHTS

Direct thermal printing has important benefits that make this technology ideal for variable information printing for many applications.

- **HIGH-RESOLUTION IMAGES.**
- **NO CONSUMABLES: NO TONER, RIBBONS OR CARTRIDGES.**
- **VERY FAST PRINTING.**
- **PRINTERS ARE RELIABLES AND DURABLE, WITH LOW MAINTENANCE COST.**
- **SMALL AND NOISELESS PRINTERS.**
- **EASY-TO-USE.**

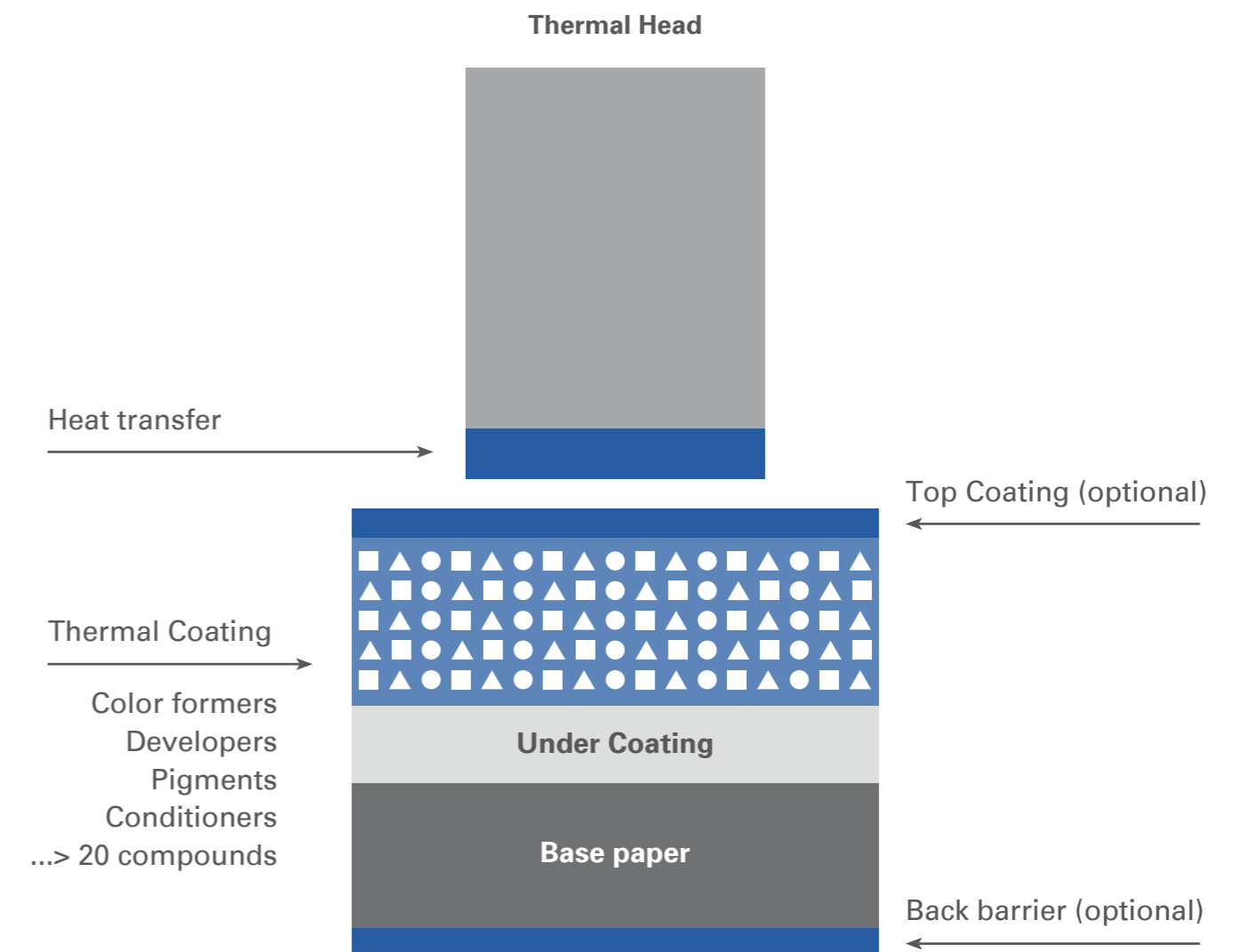
## STRUCTURE

Base paper requires having a high smoothness and a very good dimensional stability.

Under coating layer, that covers the base paper, guarantees a uniform and smooth surface for a better image resolution and definition.

Thermal coating is formed by a large amount of compounds (color formers, developers, sensitizers, pigments, conditioners, etc.), which react with each other to create the image when subjected to heat.

Thermal papers may contain a top coating on the front to increase the protection against mechanical or chemical agents, or a back barrier on the backside to provide further protection during lamination process.



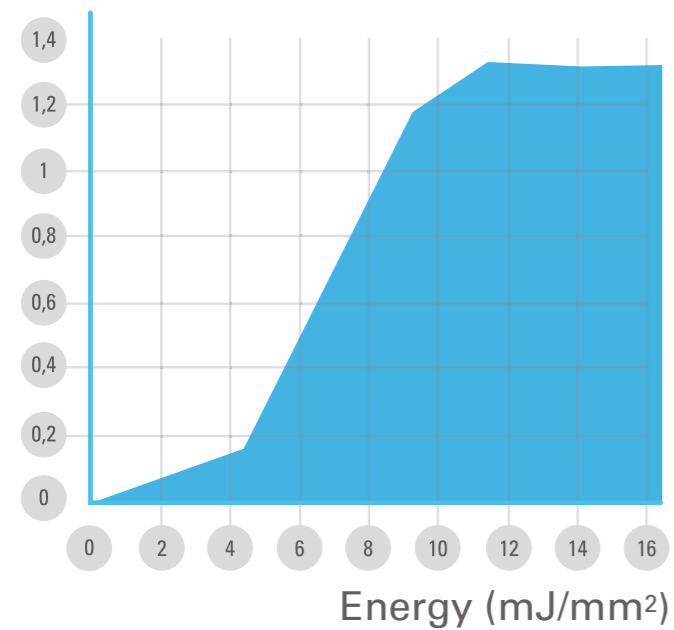
# DYNAMIC AND STATIC SENSITIVITY

When choosing the right thermal paper for an application, it is important to consider the sensitivity factor, a crucial element in direct thermal printing. The sensitivity of thermal paper determines the speed at which the image can be printed and the temperature's resistance of the thermal paper before it blackens.

There are two types of sensitivity: dynamic sensitivity and static sensitivity. Both are measured with graphs showing the optical density of the image depending on the energy and the temperature applied respectively.

## DYNAMIC SENSITIVITY

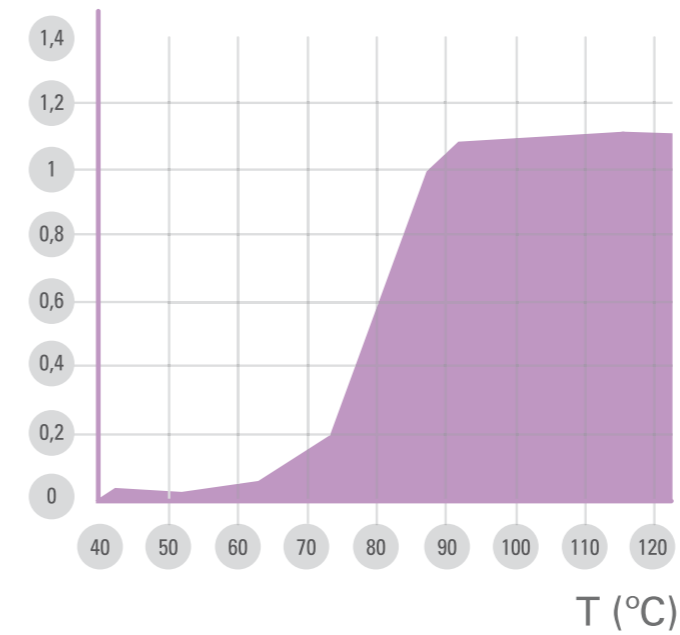
Optical Density (O.D.)



Dynamic sensitivity shows the energy level necessary to make the color appears. It is especially important when selecting the thermal printer, since the higher the dynamic sensitivity of the paper, the faster the printer is able to operate.

## STATIC SENSITIVITY

Optical Density (O.D.)



Static sensitivity refers to the temperature at which the paper starts to react. Static Sensitivity curves are important when considering using thermal paper in exigent environmental conditions like high temperature and UV exposure.



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# THERMAL PAPER APPLICATIONS

Termax papers are designed to meet all the specific thermal applications' requirements at different temperatures and environmental conditions.

## POS

Sales receipts and vouchers, ATM receipts, medical charts, coupons and gambling vouchers. The POS segment covers an extensive range of applications.

Technical specifications of Termax range are constantly evolving to supply solutions to current market demands: low-substance products ensure a higher productivity, providing more paper per roll for retail applications; high-caliper products guarantee receipts of exceptional quality; and products with high image durability and sensitivity ensure optimum productivity and printing results in all the printers available in the market.

## TICKET

Entertainment tickets, bank statements, invoices, boarding passes, lottery and gaming tickets, transport tickets and tags applications are grouped in the ticket segment. Each ticket application requires a specific thermal paper designed for this purpose.

Lecta has an extensive variety of top coated and non-topcoated grades paper products for tickets, in several grammages and calipers, with different levels of sensitivity, durability and resistance to external agents according to the intended end use. Tickets printed information remains intact, without any damage when using. Termax papers guarantee an outstanding printability of image and optimum background printing results.



# THERMAL PAPER APPLICATIONS

## LABEL

Termax grades for use as facestock in self-adhesive labels benefit from Lecta's deep know-how on the Labelling market.

Self-adhesive thermal labels can be found in many spheres of life. These include short-term labels for fruits and vegetables in supermarket scales, food labels in the retail sector and dispatches and shipments' labels for the growing logistics industry. Other applications include luggage labels for air transport and labels for pharmaceutical labs. Printed image, in the label segment, must be clear and sharp in order to guarantee excellent bar code contrast and flawless legibility in case of scanning.

Termax facestocks have optimum performance in the adhesive process and meet various levels of resistance to external factors ensuring label's useful life. Termax range includes ECO (non top-coated) papers for labelling food stored in dry environments and short-term logistics labels. The range also contains TOP-coated protected papers for label applications that require resistance to moisture's exposure, grease or heat, as well as physical scratch.

Termax proposes the right paper for every application, providing a real end-use performance of the label.



# TERMAX RANGE

## Series TES, TEX Standard

Standard thermal paper for POS application, with standard sensitivity and good printability for high speed thermal printers. Bisphenol A free and Phenol free available.

## Serie TES+ Standard UV offset printable

Improved standard thermal paper for POS applications to be suitable for UV offset printing on the thermal side, with standard sensitivity and good printability for high speed thermal printers. Bisphenol A free.

## Series TFS, TFX High sensitivity

Thermal paper with high sensitivity, good printability for high speed thermal printers, very good image resolution and good rigidity for label and ticket applications. UV offset printable. Bisphenol A free and Phenol free available.

## Serie TRF High Resistance

Non top-coated thermal paper but features a special chemical formulation which produces a higher resistance against external influences than traditional non-topcoats. Bisphenol free.

## Serie THR Heat Resistance

Non top-coated thermal paper with a special thermal layer that gives a good heat and light resistance. Designed to be used in outdoor parking meter tickets. Bisphenol A and Bisphenol S free.

## Serie TC10 TC High Resistance

Top-coated thermal paper, with high scratch resistance and good chemical and environmental protection. Bisphenol free.

## Serie TC20 TC Excellent Resistance

Top-coated thermal paper with excellent resistance to grease, moisture and plasticizers. Phenol free.

For more information about Termax range,



visit us at [www.lecta.com](http://www.lecta.com)



# SUSTAINABILITY

Lecta is firmly committed to sustainability. It is the principle that guides our business activity, ensuring that it is respectful towards the environment and the society that surrounds us.

Years of effort and more than 146 million euros allocated to environmental projects since 2008 have enabled us to obtain the strictest environmental management and quality certifications, thus minimizing our environmental footprint.

Currently, all Lecta manufacturing sites hold ISO 9001 quality certification, ISO 14001 and EMAS environmental management certifications, ISO 50001 energy management certification and ISO 45001 occupational health and safety certification.

Furthermore, Lecta is able to guarantee the responsible origin of the wood used to manufacture its products, in strict compliance with EU Timber Regulation and PEFC™ and FSC® (C011032) Chain of Custody standards, thereby offering maximum credibility and transparency in its wood sourcing operations.

One of the key elements that defines Lecta's commitment to society and good business practices is active membership in the United Nations Global Compact, the world's largest Corporate Social Responsibility initiative.

Lecta actively collaborates in diverse initiatives that promote corporate social responsibility, transparency and sustainability such as Sedex, CDP, EcoVadis or Paper Profile.

