

WHAT IS TERMAX PAPER?

Termax is the range of thermal paper manufactured by Torrapapel.

Thermal paper is a paper type used on a daily basis for a wide variety of operations: when we go to the supermarket and receive a sales slip, when we receive a fax, or simply when we place a parking meter receipt on our dashboard. All of these papers are thermal papers.

Thermal paper sales slip



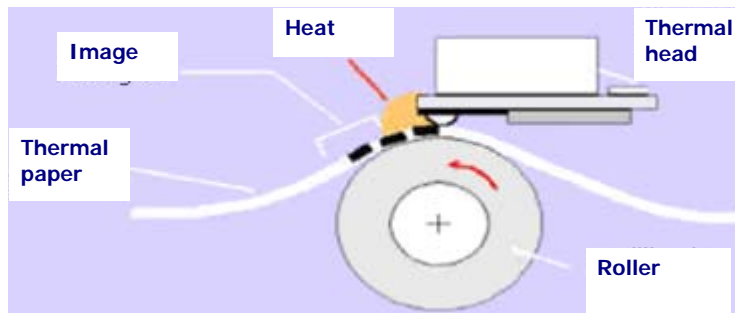
These papers are printed in printers that do not use ink cartridges. This is because the papers themselves contain the necessary components for printing. Printing is carried out by applying heat, hence the name thermal paper.

How a thermal printer works

In a thermal printer the image is created through the direct transfer of heat (thermal energy) to the chromatic reagents of thermal paper. These reagents are found in colorless format in a layer of topcoating on the surface of thermal paper. Heat is transferred to the paper through the thermal head. The thermal head consists of small heatable elements distributed lengthways along the width of the print that emit heat when electronically activated. Contact between the paper and the thermal head is guaranteed by a pressure roller that drags the paper.

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Application of heat through the thermal head

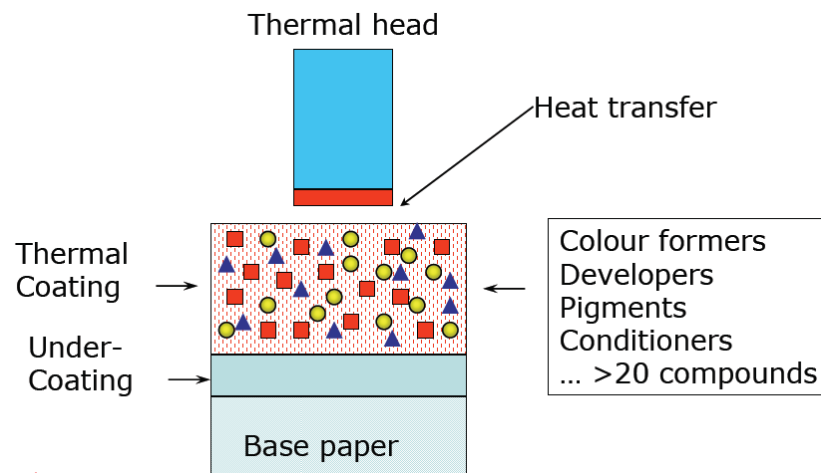


Composition of thermal paper

The following elements are characteristic of thermal papers:

- ❖ **paper substrate:** paper base over which the layers of coating are applied. The pulp and Termax range paper substrate are manufactured by Torraspapel.
- ❖ **precoating layer (UC Under-coating layer):** lower layer that covers the substrate guaranteeing a smoother, more uniform surface over which the thermal layer will be applied and allowing for a more even distribution of the thermal layer. Greater smoothness of this layer results in better resolution and definition of the image (better quality) when printing thermally. At the same time, it prevents the conduction of heat to the paper and optimizes the sensitivity qualities of the thermal layer.
- ❖ **thermal layer:** upper layer formed by a large amount of chemical compounds which, when subjected to heat, react internally and form the image without any interaction at all with the UC layer. The three main components of this layer are: a color former, a color developer (or coreactant), and a sensitizer (or regulator of the fusion point).

Diagram of the functioning and composition of thermal paper



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An additional thermal layer may prove harmful: chemical environments, scratches or other physical damage, or extreme environmental conditions (such as high humidity or temperatures).

protective coating can be applied to the to protect it from external influences that

At the same time, thermal paper can have a protective coating on its back for cases in which this surface must be exposed to such influences as adhesives that can migrate toward the interior of the paper (in some self-adhesive labels) and plasticizers.

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