



## We're talking plain text

### Thermal Paper and Durability

Direct thermal technology is booming – and with it the market for thermal paper. No surprise: Direct thermal technology is prevailing and offers a multitude of system advantages compared with competitive technologies. Nonetheless, thermal paper which is used in direct thermal technology is suffering from a negative image. Namely with regard to durability. Unfairly! The market offers sufficiently stable thermal papers which also satisfy extreme demands. It is decisive that the relevant optimum paper is found for the corresponding application.

#### The everyday test

A durability guarantee for thermal paper from five to ten years sounds good. But what is the situation in practice? It is a fact that many manufacturers give durability guarantees that are not oriented towards the actual conditions of everyday use. A guarantee from the manufacturer is not a satisfactory response to the actual usability. Paper which is used purely for information purposes, which comes out of the fax or the printer and is filed away, does

not have to withstand much. This kind of paper can normally still be read after five to ten years without any problems. However, a receipt, for example, is exposed to various influences.

1. The customer receives the receipt in a shop. (Contact with hand cream and perspiration). The receipt is kept temporarily or for a longer period in a purse or wallet (contact with softeners and tannins).
2. On arrival at home, such a receipt is left lying on the kitchen table (perhaps it comes into contact with liquids such as coffee or with grease).
3. The receipt is kept in a plastic file (again contact with softeners).

Thus the handling of the receipt does not correspond to the standard conditions which the manufacturer requires in order to guarantee the indicated durability. Furthermore, the paper is already so chemically tainted before its planned long-term storage that the guarantee no longer has any meaning.

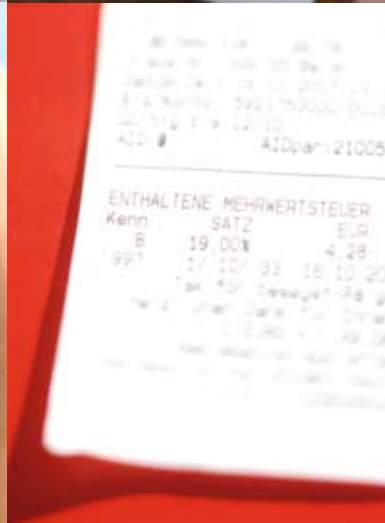
### Thermal printing prevails

#### The advantages

- > quiet
- > reliable
- > low running costs (low maintenance and energy saving)
- > no other consumables such as toner, ink, etc.
- > easy to use
- > no solvents
- > compact print unit, so ideal for portable handheld devices

#### thermoscript offers

- > excellent printing results
- > perfect print head performance (no print deposits)
- > outstanding suitability for high-speed printers



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A blurred, faded typeface.  
That's how a receipt looks which  
has come into contact with grease,  
perspiration, liquids or softeners.

## Fading – no thanks

In many areas of POS and ATM applications, but also in the medical sector, original fax/POS paper is no longer accepted. The retail business, among others, has already been demanding so-called „Real Life Guarantee“ for some years. Mitsubishi HiTec Paper has responded to this. We have developed the product P 5045 and placed it successfully on the market thanks to an outstanding price-performance ratio. This paper differs from standard POS paper by virtue of its high chemical durability. This is the fundamental precondition for guaranteeing the requisite minimum storage time even under the extreme conditions described.

### Conclusion:

All thermal papers shape the typeface under the influence of heat as the result of a chemical reaction. Manufacturers indicate climatic conditions under which the paper can be optimally stored. If the customer complies with these conditions, he can rely on the guaranteed durability. But additional factors which can lead to a chemical deterioration are not taken into account here. When it is known in advance that products cannot be stored under the recommended conditions, or chemical or increased climatic demands cannot be ruled out, you should change to relevant stable products. Define exactly for which application the paper is needed. We at Mitsubishi HiTec Paper will then recommend the optimal paper for you. The chemical stability is shown explicitly in the respective technical data sheets.

„As manufacturer we have subjected our products to extensive tests. Our product and processing constancy is strictly supervised in consequence of our ISO certification. We know that our paper can be stored under the recommended conditions for longer than the guaranteed periods.“

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