

Thermax[®] Irreversible Temperature Recording Strips

Product Data Sheet

Product Description: A series of temperature test labels that will permanently record the highest temperature reached by the label.

What They Are:

These self-adhesive labels consist of a series of temperature-sensitive elements sealed between heat-resistant substrates with transparent windows. Each element changes color distinctly as its rated temperature is exceeded. The changes are irreversible, providing a temperature history of the surface being monitored. The labels will not de-laminate when removed for reference and can be attached to an inspection report to serve as a permanent record.

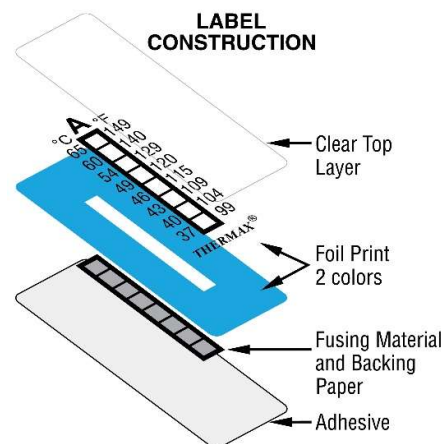
How the labels work:

The temperature-sensitive elements are phase-change indicators which use the sharply defined melting points of a series of specially purified organic chemicals to give the unique, high precision, color change effects. Each temperature element uses a different chemical compound and is made separately by applying a coating containing the chemical to a special absorptive paper substrate. When the rated temperature is exceeded, the chemical melts and is absorbed by the substrate, causing a permanent color change. Up to ten elements can be combined together on a single label.

Label Construction:

<u>Component:</u>	<u>Thickness</u>
Print foil	>10 μ
Melinex Polyester film (171°C and below)	50 μ
Kaladex film (177°C to 204°C)	50 μ
Kapton Polyimide film (210°C and above)	50 μ
Adhesive with white carrier (171°C and below)	125 μ
Adhesive with no carrier (177°C and above)	50 μ
Adhesive with tissue carrier (177°C and above)	100 μ
Black coated paper & backing	>150 μ
Release Liner	75 μ

Above values are general guides for illustration purposes only.



Physical Properties:

	Low Temperatures (171°C and below)	Mid Temperatures (177 to 210°C)	High Temperatures (above 210°C)
Adhesive Type	Modified Acrylic	Lot # Prefix E Prefix = Acrylic reinforced with glass fibres C & G Prefix = Modified Acrylic	Lot # Prefix E Prefix = Acrylic reinforced with glass fibres C & G Prefix = Modified Acrylic
Carrier	White Polyester	Lot # Prefix E Prefix = No Carrier C & G Prefix = Tissue	Lot # Prefix E Prefix = No Carrier C & G Prefix = Tissue
Covering Film	Polyester	Kaladex	Polyimide
Color Change Material	Non-toxic, white crystalline solid on a black absorbent backing, adhered with acrylic adhesive		
Tolerance	Less than 100°C = ±1°C 100°C to 154°C = ±1.5°C Greater than 154°C = ±4°C		
Guarantee	Temperatures from 29 – 34°C / 84 – 93°F = 6 months guarantee, providing they are stored in a refrigerator inside a sealed bag. Temperatures from 37 – 49°C / 99 – 120°F = 12 months guarantee, providing they are stored in a refrigerator inside a sealed bag. Temperatures from 54 – 290°C/ 130 – 554°F = 24 months guarantee, store at room temperature & Humidity (i.e. 16°C/60°F-27°C/80°F & 40-60% relative humidity)		

Custom Products:

In addition to the standard **Thermax**[®] labels, which cover the temperature range of 29 - 290°C, a full custom manufacturing service is available, and products can be manufactured to meet customers' precise requirements of, for example, size, shape, color, temperature range, number of temperature elements, graphic printing (logos etc.). Please ask for details.