Tempil®
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Thermax® Irreversible Temperature Recording Strips

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.

Physical Properties:

	Low Temperatures (17 1°C and below)	Mid Temperatures (177°C and below)	High Temperatures 2 10°C +
Adhesive Type	Acrylic	Modified Acrylic	Modified Acrylic
Carrier	Polyester	Tissue	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 to154°C = ±1.5C Greater than154°C = ±4 °C		
Shelf Life	12 months from invoice date when stored in a cool dry environment (<64°F &< 50% relative humidity)		
Thickness	At temperature indicator chemical 6.5 mil No temperature indicator chemical 1 .5mil		

Label Construction

Component:	Thickness
Print foil	>10µ
Melinex Polyester film (171°C and below)	50µ
Kaladex film (1 77°C to 204°C)	50µ
Kapton Polyimide film (210°C and above)	50µ
Adhesive & carrier (without liner)	75 - 85µ
Black coated paper & backing	>150µ
Release Liner	75µ

Above values are general guides for illustration purposes only.