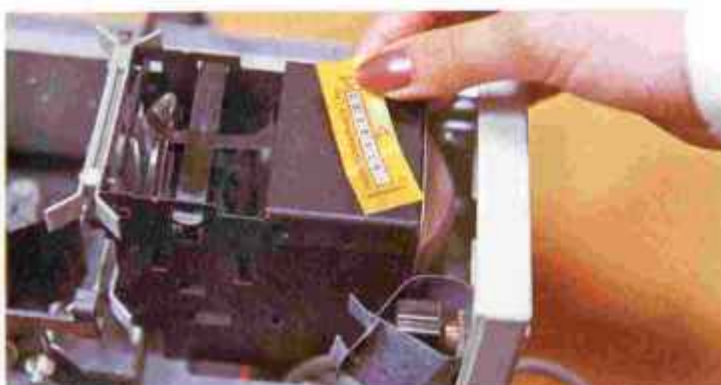




# THERMOGRAPHICS MEASUREMENTS LIMITED

 Manufacturers of  
**THERMAN<sup>®</sup>**  
**RANGE OF PRODUCTS**

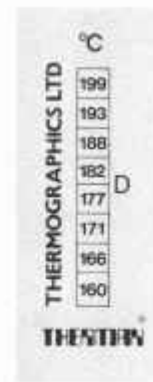
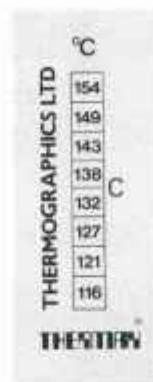
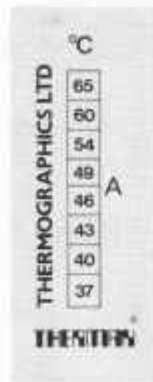
Registered Office: Honiton, Devon





# THERMAX<sup>®</sup> Thermometer Strips

Actual size



Accuracy + or - 1%

Available in 5 standard ranges 'A', 'B', 'C', 'D', & 'E' or any combination of temperatures within this range upon request. Each label measures 50 x 20mm. Each pack contains 10 strips.

All ranges are available in reel form.

- Change from silver grey to black upon exposure to temperature
- Encapsulated - Impervious to oil, water and steam
- Ideal method for Plotting temperature
- Simple to read
- Self adhesive.

# THERMAX<sup>®</sup> Record Indicators

Individual temperatures available from 37°C to 260°C in the increments quoted for Thermax Thermometer Strips

## Encapsulated

- Impervious to oil, water and steam

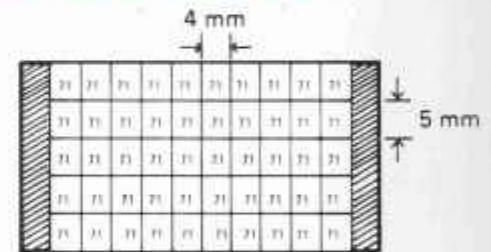


- Low cost
- Size 13mm x 13mm
- Each packet contains 100 indicators

Accuracy + or - 1%

- Self adhesive
- Simple to use - no skilled operator required
- Simple to read - change from white to black on exposure to temperature
- Fast response time not greater than 1 second
- Ratings printed on individual indicators are discernible before and after exposure to temperature

## Non-encapsulated



- Small size 4mm x 5mm
- Low cost
- Each packet contains 120 indicators

# THERMAX<sup>®</sup> Encapsulated Clock Indicators



No 1  
Range  
40-54°C



No 2  
Range  
60-82°C



No 3  
Range  
88-110°C



No 4  
Range  
116-138°C



No 5  
Range  
143-166°C



No 6  
Range  
171-193°C



No 7  
Range  
199-224°C



No 8  
Range  
232-260°C

- Only 14mm in diameter
- Any combination of temperatures selected from standard range
- Ideal method for monitoring temperatures of electronic components.
- Self adhesive • Changes from silver/grey to jet black in clock rotation upon exposure to temperature.
- Simple to read • Supplied in packs of ten
- Range of 41 temperatures : available between 37°C and 260°C.

## Eight Standard Ranges - Five temperatures per range.

Response time of all Indicators and Thermax Thermometer Strips not greater than 1 sec.

**New Product**

# Clearline Temperature Indicating Paints

## Features

- Easy to use. Spray or brush application. Apply to a grease free surface and leave for twenty minutes before use.
- Superior performance in normal and hostile environment
- The colour changes of these paints are not reversible
- Ideal for producing a rapid and comprehensive Thermal Survey of surface temperature.
- Strong clear colour contrast
- Resistant to oil, steam, water, gas and weather
- All one pack paints. No Additives required.

The application for temperature indicating paints are many and varied. They are particularly useful as a monitoring agent, when it is important to spot sudden rises in temperature. For example, a typical application concerns pipe lines and plant carrying hot material. The safe operating temperature is known and the vessel is coated with a paint that changes colour if this point is exceeded. A constant 'watch dog' giving a visual warning of any dangerous hot spots - photograph inset back page (bottom right). They are equally effective for checking correct curing temperatures after any heat treated component has cooled and reached inspection as the colour changes can be noted at temperature or when cooled.

## Single Change Paints

A comprehensive range of 10 change points ranging from 60°C to 610°C. For details see overleaf.  
Uses: General Industry

## New Product

All paints are available as Thermal sprays

## Multichange Paints

**GT1** Uses: Gas turbine work and hostile gases.

**C2** Uses: General purpose

**C3A** Uses: Combustion work and general purpose



● full colour changes and details see overleaf.



## THERMOGRAPHICS Portable Digital Meter Instant Action Thermometers

### Model 9500

Using (NiCr-NiAl) thermocouple  
 $\pm 0^{\circ}\text{C}$  to  $+1200^{\circ}\text{C}$



#### Accuracy

The accuracy is  $\pm 0.5\%$  of the indicated value  $\pm 1$  digit. This is e.g. max.  $\pm 2^{\circ}\text{C}$  at  $+200^{\circ}\text{C}$  or  $\pm 3^{\circ}\text{C}$  at  $+400^{\circ}\text{C}$

**Extremely fast** New thermocouples with a rapid response. Final reading ( $t_{99}$  = time until final reading 99% of temperature increase) in liquids 0.5 secs., on surfaces approx. 4 sec.

### Model 1500

Using precision thermistor probes  
 $-40^{\circ}\text{C}$  to  $+140^{\circ}\text{C}$



#### High accuracy

The maximum tolerance of meter and probe as one unit between  $-25^{\circ}\text{C}$  and  $+25^{\circ}\text{C}$  is  $\pm 0.5^{\circ}\text{C}$ , at a temperature of  $+100^{\circ}\text{C}$  only  $+1.1^{\circ}\text{C}$

### Model 5500

Using (FE)/Constant thermocouples  
 $-40^{\circ}\text{C}$  to  $-700^{\circ}\text{C}$



#### Accuracy

$-40^{\circ}\text{C}$  to  $199^{\circ}\text{C}$   $\pm 0.5^{\circ}\text{C}$   
 $+200^{\circ}\text{C}$  to  $700^{\circ}\text{C}$   $\pm 0.5^{\circ}\text{C}$  + 1 digit

■ A complete range of hand held portable instruments with interchangeable probes are available on a 14 day FREE TRIAL

■ For further information on all products please apply to:-

## H.A.WAINWRIGHT & CO.LTD.

9A FARNCOMBE STREET, FARNCOMBE,  
GODALMING, SURREY, GU7 3BA, ENGLAND.  
Telephone Godalming 28545 (STD Code 048 68)  
UK Telex No. 859364

• Specialist instruments and probes for Food Engineering, measurements of revolving and oxidized surfaces also available.



## Clearline Temperature Indicating Paints

Used throughout industry, Thermal **ULTIMHEAT** provide an ideal method of checking **VIRTUAL MUSEUM** measuring temperatures achieved during processing and curing. They may be used as a protective measure when used on vessels carrying high temperature gases and liquids. The smallest type of breakdown in the refractory lining will raise the temperature of the outside casing and the Thermal Paint will change colour, giving an early visual warning of imminent refractory breakdowns. The multi-change paints are an especially invaluable aid in the development of jet engines saving endless hours of Rig Running Components to destruction.

60°C		PINK to BLUE
120°C		PINK to BLUE
165°C		MAUVE PINK to BLUE
200°C		BLUE to GREEN
235°C		YELLOW to RED
250°C		BLUE to FAWN
350°C		MAUVE/RED to GREY
370°C		MAUVE to WHITE
430°C		GREEN to WHITE
560°C		ORANGE to YELLOW
610°C		RED to WHITE

### Multi-Change C2

400°C		PURPLE to PINK
500°C		PINK to FAWN
580°C		FAWN to BLUE

### Multi-Change C3A

450°C		RED to DUSTY GREY
500°C		DUSTY GREY to YELLOW
600°C		YELLOW to ORANGE
700°C		ORANGE to GREEN
800°C		GREEN to BROWN
900°C		BROWN to GREEN GREY
1000°C		GREEN GREY to DARK GREY
1100°C		DARK GREY to BLACK

### Gas Turbine No.1

600°C		PURPLE to PALE BLUE-Below.
800°C		PALE BLUE to DARK GREY
930°C		DARK GREY to LIGHT GREY
980°C		LIGHT GREY to PURPLE
1020°C		PURPLE to BLACK
1050°C		BLACK to MATT GLAZE
1070°C		MATT GLAZE to FULL GLAZE

Response time of the above range of paints  
-Approximately 10 seconds.

#### Insulated Vessel Application

Vessel carrying liquid chemical at 1400°C skin temperature is controlled at approximately 200°C. Any breakdown in the Vessel lining will cause the paint to change colour due to temperature increase.

### Research Kit

A box containing sample quantities of all Thermographics measurement temperature sensitive paints, strips and indicators.



Test samples of multi-change paints.



GT1 C3A C2

#### Insulated vessel application

