

# THERMOSCALE 200C

## 1 Overview

THERMOSCALE is a film used to measure heat distribution easily, as areas of color appear within it of different densities and hues depending on the quantity of heat to which these areas are subjected.

## 2 Structure and Principle

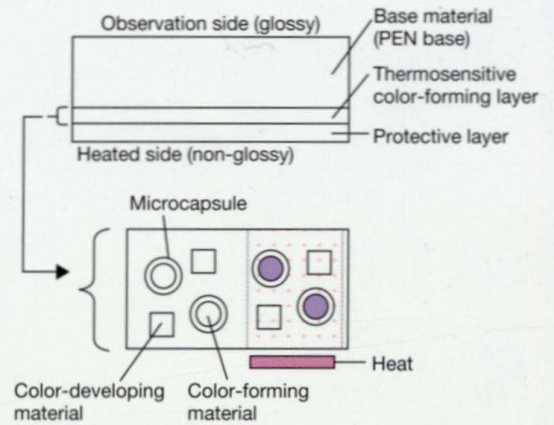
### ● Structure

As shown in the illustration to the right, the film has a thermosensitive color-forming layer plus a protective layer below the base material.

A color corresponding to the quantity of heat to which the surface is subjected is produced by the thermosensitive color-forming layer. By observing the variations and density of color, the heat distribution can be checked.

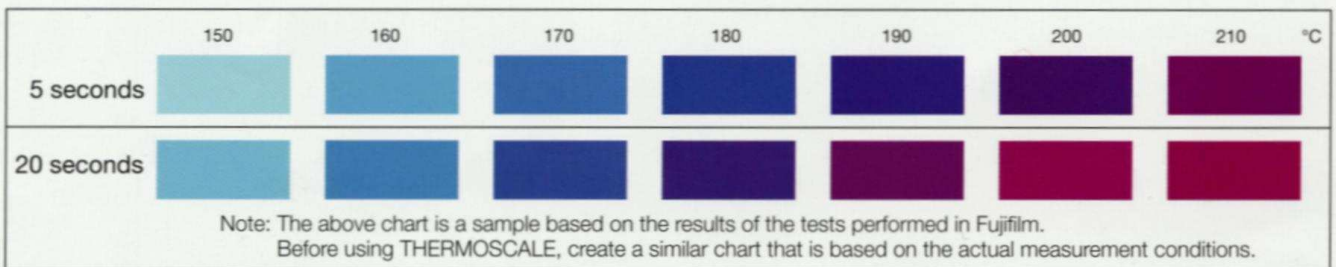
### ● Principle

When the film is subjected to heat, the color-developing material dissolves and the wall of the microcapsule becomes permeable. The color-developing material then penetrates the capsule reacting with the color-forming material, causing an area of color to appear.



## 3 Property

The color varies according to the temperature and duration of the heat to which the film is subjected. The shorter the duration is, the paler and the more bluish the color is. The longer the duration is, the more saturated and the more reddish the color is. As the color will also change depending on other factors such as the material measured, its thermal properties, contact pressure and air currents, please read the notes below when using this product.



## 4 How to Use

Take the THERMOSCALE film out of its bag and trim it into the required shape. Place the film over the area to be measured so that it may be subjected to its heat. The non-glossy side of the film should be in contact with the heat source. After measurement is complete, take off the film from the item being measured and check the heat distribution by observing the variation in density and hue in the film from its glossy side.

## 5 Precautions for Use

- ① Colors may vary depending on various conditions such as ambient temperature, humidity, air currents and contact pressure.
- ② Moisture or fingerprints on the film may leave a mark, causing unevenness of color.
- ③ If there is water, oil or dust on the surface to be measured, colors may not appear properly.  
Be sure to clean the surface before measurement.
- ④ The film cannot be reused.
- ⑤ Do not place your hand or other warm or hot item on the heated film as this may leave a mark.
- ⑥ Use the film before the expiration date indicated on the label attached to the side of its box.

## 6 Precautions for Storage

- ① Keep the film away from direct sunlight and flame. For long-term storage, place it in a cool and dark area at 30°C or below.
- ② Make sure that, during storage, the film does not come into contact with any of the following:  
water, alcohol, solvent, chemicals such as plasticizer, diazo copy paper, instant photos, cellophane tape, rubber products and felt-tip-pen ink.
- ③ Keep any unused film in its original packing bag. Fold up insert side of the bag.

### Limited Warranty:

If this product is found to be faulty due to any defect in our manufacturing or packaging, our liability shall be limited to its replacement with an equivalent quantity of new products.