



## WARMMARK

Distributor: SERCALIA, S.L.  
Casp, 116, Ppal, 4 - 08013 - BARCELONA (Spain)  
[www.sercalia.com](http://www.sercalia.com) - [info@sercalia.com](mailto:info@sercalia.com)  
Tel. +34 934 531 411

### 1. Description and application

Stiff, adhesive label with irreversible indication that a certain temperature has been exceeded. Available in a number of configurations, WARMMARK can have low activation temperatures, as low as -18°C, or high, up to 37°C depending on the application and on requirements.

### 2. Chemical and physical characteristics

#### 2.1 Activation temperatures and times

| Product              | Activation temperature                    | Activation time           | Dimension (mm)   |
|----------------------|---|---------------------------|------------------|
| WarmMark             | -18 °C to +37 °C<br>(0 °F to + 99 °F)     | 30 minutes to<br>48 hours | 20,32x45,72x2,54 |
| WarmMark Duo         | +10 °C and +34 °C<br>(+50 °F and + 93 °F) | up to 3, 8, 14<br>days    | 10,16x99,06x2,54 |
| WarmMark Long<br>Run | +10 °C , +31 °C<br>(+50 °F and + 77 °F)   | up to 7 days              | 10,16x99,06x2,54 |

| Temperature | WarmMark<br>Window activation time |                |                |
|-------------|------------------------------------|----------------|----------------|
|             | 1 <sup>a</sup>                     | 2 <sup>a</sup> | 3 <sup>a</sup> |
| -18°C (0°F) | <1 hour                            | 3 hours        | 12 hours       |
| 0°C (32°F)  | 2 hours                            | 12 hours       | 48 hours       |
| 5°C (41°F)  | <30 minutes                        | 2 hours        | 8 hours        |
| 8°C (46°F)  | 2 hours                            | 12 hours       | 48 hours       |
| 10°C (50°F) | 2 hours                            | 12 hours       | 48 hours       |
| 20°C (68°F) | 2 hours                            | 12 hours       | 48 hours       |
| 25°C (77°F) | <30 minutes                        | 2 hours        | 8 hours        |
| 30°C (86°F) | <30 minutes                        | 2 hours        | 8 hours        |
| 32°C (90°F) | 2 hours                            | 7 hours        | 36 hours       |
| 37°C (99°F) | <30 minutes                        | 2 hours        | 8 hours        |



| Temperature | WarmMark Long Run<br>Window activation time |                |                |                |                |
|-------------|---|----------------|----------------|----------------|----------------|
|             | 1 <sup>a</sup>                              | 2 <sup>a</sup> | 3 <sup>a</sup> | 4 <sup>a</sup> | 5 <sup>a</sup> |
| 10°C        | 12 hours                                    | 36 hours       | 60 hours       | 100 hours      | 168 hours      |
| 31°C        | 12 hours                                    | 36 hours       | 60 hours       | 100 hours      | 168 hours      |

Indicators with longer exposure times can be made on request and for interesting quantities.

The activation times given are those necessary to make the colour of the window change completely when the indicator is exposed constantly to a temperature of +/- 1°C of that indicated.

## 2.2 Indication system

The indicator's window colour is white when the ambient temperature where it is located is no higher than the value given in the window itself. It turns red when the indicated time/temperature values are exceeded.

## 3. Packaging

The product is packed in plastic bags with snap-in closure.

## 4. Production and Quality

The manufacturer is UNI EN ISO9001 / ISO14001 certified and produces in accordance with the requirements of the main European and international standards in the sector.

The values indicated here are the result of standardised lab tests and meant only as an indication to help select and use the products. The user is responsible for ensuring the suitability and completeness of such information in relation to how the product is to be used.