Product Specifications

Response Temperatures	-18°C/0°F to 37°C/ 99°F
Accuracy	±1°C of its response temperature
Tag Size	.75 in. x 1.81 in. x .06 in.; (1.9 cm x 4.6 cm x .15 cm)

Storage and Handling Instruction

The WarmMark Time-Temperature Indicator is not self-activating. The activation tab of the indicator must be pulled until the barrier film is completely removed before the tag will operate

Store the WarmMark Time & Temperature Indicator at least 5°C below its response temperature

Storage at these temperatures ensures the indicator is in a complete solid state at the time of activation. If the indicator is not in a solid state when activated, the tag will begin to run out immediately. If using a WarmMark indicator with a response temperature below ambient temperature, adhere the indicator to the package or product to be monitored before the activation tab is pulled

Immediately place the indicator in the environment to be monitored. If the indicator is left exposed at or above its response temperature, the chemical will change back to a liquid state and the run out process will begin

To apply the WarmMark indicator, peel the adhesive liner from the back of the indicator exposing the pressure sensitive adhesive. Adhere the indicator to a clean, dry surface

The activated WarmMark indicator will begin to run out at its stated response temperature ±1°C

DeltaTRAK will not honor warranty claims for products that have not been stored and/or handled in accordance with the above guidelines

To Activate Fold Up & Pull

WarmMark™ Time - Temp Tag

RED INDICATES
BRIEF
MODERATE
PROLONGED
EXPOSURE

Before

WarmMark™ Time - Temp Tag

RED INDICATES
BRIEF
MODERATE
PROLONGED
EXPOSURE

After

Model 51013 0°C/ 32°F

Model 51014 5°C/ 41°F

Model 51017 10°C/ 50°F

Model 51018 20°C/ 68°F

Model 51020 30°C/ 86°F

Model 51021 37°C/ 99°F

Model 51022 8°C/ 46°F

Model 51034 -18°C/ 0°F

Model 51035 25°C/ 77°F

- **Designed for accurate time/ temperature monitoring**

- **Provides a permanent temperature exposure record that assures your customers of consistent quality**

- **A blotter paper pad saturated with a red-dyed chemical is specially formulated to melt at the tag's response temperature**

- **Available in a variety of response temperatures**

- **Easy to use**

Product No.	Response Temp	Window #1	Window #2	Window #3
51013	0°C / 32°F	2 Hr (±0.4 Hr)	12 Hr (±1 Hr)	48 Hr(±2 Hr)
51014	5°C / 41°F	20 Min (±5 Min)	2 Hr (±.4 Hr)	8 Hr (±0.75 Hr)
51017	10°C / 50°F	2 Hr (±0.4 Hr)	12 Hr (±1 Hr)	48 Hr (±2 Hr)
51018	20°C / 68°F	2 Hr (±0.4 Hr)	12 Hr (±1 Hr)	48 Hr (±2 Hr)
51020	30°C / 86°F	20 Min (±5 Min)	2 Hr (±0.4 Hr)	8 Hr (±0.75 Hr)
51021	37°C / 99°F	20 Min (±5 Min)	2 Hr (±0.4 Hr)	8 Hr (±0.75 Hr)
51022	8°C / 46°F	2 Hr (±.4 Hr)	12 Hr (±1 Hr)	48 Hr (±2 Hr)
51034	-18°C / 0°F	1 Hr (±5 Min)	2.5 Hr (±0.4 Hr)	12 Hr (±0.75 Hr)
51035	25°C / 77°F	30 Min (±5 Min)	2 Hr (±0.4 Hr)	8 Hr (±0.75 Hr)

How WarmMark Works

An activation tab attached to a strip of barrier film separates the white track strip and a saturated pad inside the tag. Removing the barrier film will put them in direct contact with each other. Then, if the tag is exposed above its response temperature, the red chemical in the pad melts and begins to migrate down the track strip and color in the circular windows at a controlled rate. Whenever the temperature falls below the response temperature, migration of the chemical stops. Accuracy of the WarmMark Tag is guaranteed to be within 1 C above or below the response temperature.

Run-out Time: The run-out time varies among the different response temperatures. Following are the run-out times required to fully color in each of the three windows when the tag is exposed to 2 degrees Celsius above the response temperature noted on the tag. Color change is irreversible and tamper-proof.