

## ShockWatch® Cold Chain Indicators

ShockWatch Cold Chain indicators will help you determine if your products have stayed below an acceptable temperature. Without them, a cold chain breach may go unnoticed, resulting in a compromised product.



### How can you be sure that unacceptable temperatures during transit have not compromised your product's quality and safety?

Refrigeration equipment is not always reliable, and temperature can vary in a trailer, stack of pallets, or warehouse. Your products may pass through multiple handlers during the distribution process, possibly enduring delays and substandard storage.

When you use ShockWatch temperature indicators, you can monitor the temperature of every shipment and know whether the duration of exposure was long enough to compromise product safety and efficacy.

### Benefits

- Provides irreversible evidence of exposure to unacceptable temperature conditions
- Provides cost-effective monitoring for last mile shipments
- Enables easy accept/reject decisions
- Helps monitor the shelf life of a shipped product
- Helps verify the adequacy of packaging
- Aids in compliance with regulatory guidelines



## ShockWatch® Cold Chain Indicators

### WarmMark Family of Indicators

The WarmMark family of temperature indicators are single-use devices that provide accurate, irreversible evidence of any above temperature deviation allowing you to make smarter decisions across the cold chain. The WarmMark are ascending time-temperature indicator alerts users of exposure to unacceptably high temperature conditions and the cumulative amount of time of the exposure.

#### WarmMark Key Specifications

Temperature Accuracy	± 1°C ± 2°F
Storage Conditions	Store in a dry environment below response temperature for optimal shelf life
Shelf Life	2 years from date of sale

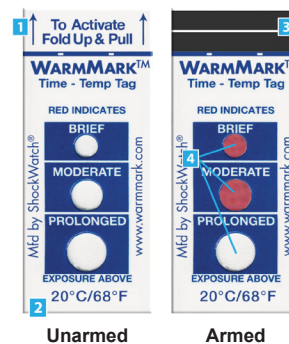
#### Run-Out Times\*

Available Temperatures	Brief	Moderate	Prolonged
-18°C / 0°F	1 hour	3 hours	12 hours
0°C / 32°F 8°C / 46°F 10°C / 50°F 20°C / 68°F	2 hours	12 hours	48 hours
5°C / 41°F 25°C / 77°F 30°C / 86°F 37°C / 99°F	30 minutes	2 hours	8 hours

\*Run-out times are based on a 2°C above threshold isothermic condition and proper pre-conditioning.

#### WarmMark Product Features

1. Field-armable with pull tab
2. Temperature sensitivity
3. Black stripes show product armed
4. Brief, moderate, prolonged exposure times



### ColdMark Indicators

ColdMark descending temperature indicators are single-use devices that provide accurate, irreversible evidence of a below-temperature deviation allowing you to make smarter decisions across the cold chain. ColdMark is designed to help shippers identify and correct gaps in their cold chain. The ColdMark turns from clear to violet when the temperature goes below a predetermined threshold.

#### ColdMark Key Specifications

Temperature Threshold	-3°C / 26°F 0°C / 32°F 2°C / 36°F 5°C / 41°F 10°C / 50°F
Temperature Accuracy	± 1°C ± 2°F
Activation Time	30 minutes or less
Storage Conditions	Unused product must be stored above activation temperature and below 43°C / 110°F
Shelf Life	2 years from date of sale