

ShockWatch® WarmMark time-temperature 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.

## WarmMark Family of Indicators

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

## Benefits

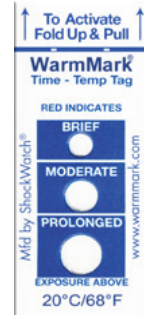
- Provides irreversible evidence of exposure to unacceptably warm temperature conditions
- Provides cost-effective monitoring of shipments
- Enables easy accept/reject decisions
- Aids in compliance with regulatory guidelines
- Helps verify the adequacy of packaging




# WarmMark® Temperature Indicators

## Arming & Use for all WarmMarks:

1. All WarmMark breach window(s) should be white prior to arming the device.
2. Before arming, the WarmMark indicator should be placed in an environment at least 5°C (9°F) below the WarmMark's activation threshold temperature for a minimum of 30 minutes.
3. To arm the WarmMark indicator, fold up and pull out the indicator's activation tab until the tab and barrier film have been completely removed.
4. If using a WarmMark indicator with an activation threshold temperature below the ambient temperature, immediately place the indicator in the environment to be monitored to avoid activation.
5. Remove the adhesive liner from the WarmMark and adhere the indicator to a clean, dry surface.
  - a. The indicator should be placed as close to the product being monitored as possible.
  - b. The WarmMark should be located where it will be visible to the receiver of the monitored shipment.
  - b. The WarmMark can be adhered directly to the product being monitored or located inside the packaging.



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			
Available Temperature	Run Out Times*			
3 Window Indicators	Brief	Moderate	Prolonged	
-18°C / 0°F	1 hr	 3 hrs	12 hrs	
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	
Single Window Indicators				
8°C / 46°F	8 hrs			
8°C / 46°F	12 hrs			
25°C / 77°F	8 hrs			
Duo	Window 1	Window 2	Window 3	Window 4
	10°C / 50°F	10°C / 50°F	10°C / 50°F	34°C / 93°F
	3 days	8 days	14 days	30 mins
*Run-out times are based on a 2°C above threshold isothermic condition and proper pre-conditioning				