



WarmMark ColdMark

The smart way...
...to monitor your cold chain



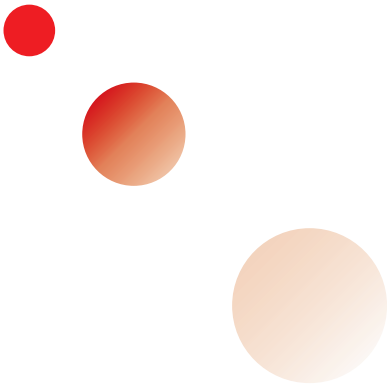
Intri●Tech



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You can deliver your product with confidence

Blizzards happen. So do blazing heat waves. And sometimes climate-controlled heating and cooling systems break down.

If your products are temperature-sensitive, you simply can't take the risk.

With WarmMark® and ColdMark® Temperature Indicators, you can be certain whether or not your products have been kept at specified temperatures during shipping or storage. With one glance, you or your customers can tell if your product has been exposed to unacceptable heat or cold.

Accurate and dependable

Both WarmMark and ColdMark are highly accurate. With strict quality control procedures, they are manufactured to respond within +/- 1° C of their specific response temperature. And when the temperature reaches the point where it could damage your product, you'll know for sure, because the change in the indicator is noticeable, irreversible and tamper proof.

Safeguard your product quality

Don't take a chance. Apply WarmMark and ColdMark Indicators to your products. And deliver a higher degree of value and customer confidence.

**You can deliver
your product with
confidence**



Monitoring the duration of exceeding damaging temperatures

Certain temperature-sensitive products must be kept cool. WarmMark Time-Temperature

Indicators monitor your products during storage and shipment, giving you an accurate, non-reversible record of temperature exposure with the passage of time. Warmmark Indicators come in a variety of response temperatures to fit many applications.

Stay

in control!



WarmMark Short-Run Indicators offer run-out times (length of exposure to a certain temperature) that span either 8 or 48 hours.

WarmMark Long-Run Indicators Monitor temperature for up to two weeks

Duo-Temperature Indicators monitor temperature for two weeks. Plus: they have an extra window for a higher temperature set point.



Monitors temperature for up to one week

Colour indicates exposure to warmer than acceptable conditions

Available in several response temperatures



Monitors temperature above 10°C (50°F) for two weeks

Provides an extra indication for a higher temperature set point of 34°C (93°F)

How WarmMark works

WarmMark operation is simple but accurate.

When the WarmMark activation tab with the attached strip of barrier film is removed, the track strip and the saturated pad inside the tag come in direct contact with each other. Then, if the tag is exposed above its response temperature, the chemical in the pad melts and begins to migrate down the track strip and colour in the circular windows at a controlled rate. Whenever the temperature falls below the response temperature, migration of the chemical stops. When the temperature rises later again, the colour change continues.

Three different versions

Different run-out times (length of exposure to a certain temperature) are offered in three versions:

Short-Run WarmMarks span either 8 or 48 hours by means of three windows.

Long-Run WarmMarks monitor temperature for up to two weeks.


Duo-Temperature WarmMarks guard temperature for two weeks and they have an extra window for a higher temperature setpoint.

Application is simple

WarmMark's construction makes it fast and simple to add the benefits of time/temperature monitoring to your product.

To prepare the WarmMark Tag for use, store the tag for a minimum of 30 minutes at least 5° C below the response temperature. Then apply the WarmMark Tag by peeling the release liner off the back of the tag and adhering the pressure sensitive adhesive backing to a dry surface. Activate it; and from that point on WarmMark will monitor your product until it reaches its destination.

Response temperature availability range	-18°C / 0°F to 37°C / 99°F
Accuracy	+/-1°C
Packaging	Per 100 WarmMark Tags
Storage	Room temperature or cold storage
Shelf life	Two years from date of manufacture
Application	Monitoring temperature of drug and medical products, vaccines, blood / plasma, diagnostics, gelatin capsule products, chemicals, chocolate candy, frozen / refrigerated food products
Length x width x thickness	4,6 x 1,9 x 0,15 cm (1,81 x 0,75 x 0,06 in.)



A freeze indicator to monitor damaging cold temperatures

Some temperature-sensitive products must never be exposed to temperatures below freezing. The ColdMark Freeze Indicator is a self-activating tool that tells you if your product has been exposed to freezing conditions. This means it puts you in control even after your product has been shipped. At a glance your customer will know whether there has been exposure to abusive temperatures.

Stay in control!



Violet indicates exposure at or below response temperature



Peel-off back liner

Batch code

A clear colourless bulb indicates no exposure at or below response temperature

Pressure-sensitive adhesive for mounting ColdMark onto your product

Capillary tube packaged in a foam piece, with a top covering and cardboard underside

How ColdMark works

ColdMark operation is simple but accurate.

The ColdMark Indicator tube and bulb contain a specially formulated colourless fluid, a violet-coloured fluid, and a green-coloured fluid separating the two.

When the indicator is exposed to a temperature at or below the response temperature for approximately 30 minutes, the colourless bulb fluid solidifies and contracts. This draws the coloured liquids into the bulb and the bulb changes from clear and colourless to cloudy with streaks of violet. When the indicator is warmed again, the bulb changes irreversibly to a uniform violet.

Application is simple

ColdMark's construction makes it fast and simple to add the benefits of temperature monitoring to your product.

Simply remove the liner from the back of the indicator and adhere the pressure-sensitive adhesive backing

to a dry surface. You can place the indicator on the exterior or in the interior of a shipping container. (ColdMark Indicators should not be placed where they are exposed to crushing pressure.) Colour change is irreversible and tamper-proof.

Know at a glance if your product has been exposed to abusive temperatures



Available temperatures	-3°C/26°F * 0°C/32°F * 2°C/36°F * 5°C/41°F * 10°C/50°F
Accuracy	+/- 1°C
Packaging	Per 100 ColdMark Tags
Storage	Room temperature (not to exceed 43°C / 110°F) or cool storage (no colder than 5°C above response temperature)
Shelf life	Two years from date of manufacture
Application	Monitoring temperature of drug and medical products, vaccines, diagnostic tests, kits, cosmetics, paint, chemicals, glue
Length x width x thickness	8,4 x 1,9 x 0,9 cm (3,25 x 0,75 x 0,375 in.)

Important notice to the purchaser:

The following is made in lieu of all warranties, expressed or implied, including the implied warranties of merchantability and fitness for purpose: Seller's and Manufacturer's only obligation shall be to replace such quantity of the product proved to be defective. Before using, user shall determine the suitability of the product for its intended use, and user assumes all risks and liability whatsoever in connection therewith. Neither seller nor manufacturer shall be liable either in tort or in contract for any loss or damage, direct, incidental or consequential, arising out of the use or the inability to use the product.



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