



# Humitector® Humidity Indicator Cards

## Purpose

To provide a simple, reliable, visual indication of the relative humidity within a sealed package or any given environment.

## What are they?

Humitector® Humidity Indicator Cards are small, paper instruments designed to monitor relative humidity levels. Available in numerous configurations, cards indicate relative humidities as low as 5 percent and as high as 95 percent, depending on the application and need.

There are two main types of humidity indicator cards: reversible and irreversible. **Reversible** humidity indicator cards work much like a thermometer, fluctuating to indicate the current relative humidity level. **Maximum**, or **irreversible**, cards are designed to indicate the highest relative humidity level to which goods have been exposed.

## Why use them?

High relative humidity levels can cause irreparable damage to sensitive equipment, supplies, products and cargo. While many shippers and manufacturers might take the proper steps to protect their products from moisture damage, such as using desiccants, it is sometimes difficult to know how effective those steps are. Some products, such as electronic goods, often show no visual sign of moisture damage, while desiccants may reach their absorption capacity before users realize they need to be replaced.

Humidity indicator cards help provide visual proof of the relative humidity level within a given environment. If the card indicates high levels of humidity, users know to replace their desiccant bags and check their products for possible damage.

## Available configurations

Süd-Chemie Performance Packaging offers three main types of Humitector Humidity Indicator Cards, all of which are available in a variety of configurations.

### Humitector (Reversible)

*Industries: Semiconductors, Electronics, Military, Industrial*

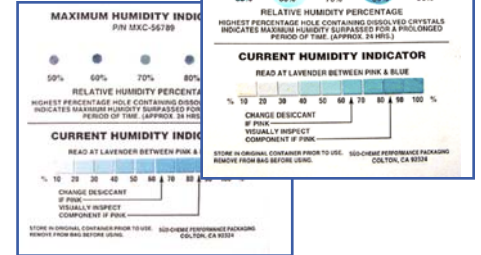
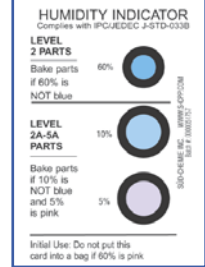
Süd-Chemie's humidity indicator cards are available in many configurations and can be customized for any number of applications. Süd-Chemie offers cards that meet military specifications (Mil-I-8835 and Mil-Std-2073-1D Method 50) and JEDEC standards (J-STD-033A and anticipated revision J-STD-033B). One-spot, three-spot, four-spot and six-spot cards are currently available, in a range of customizable humidity levels.

*(Turn over for usage and handling information)*

Humitector® Humidity Indicator Cards are available in numerous configurations to indicate various humidity levels.



Humitector Commercial Humidity Indicator Cards can be customized with company names and logos.



Humitector Maximum Humidity Indicator Cards feature blue crystals that permanently dissolve when a certain humidity level has been reached.

## Typical applications

- ✓ Semiconductors
- ✓ Electronics
- ✓ Military components
- ✓ Optical instruments
- ✓ Preservation packaging
- ✓ Bulk Packaging
- ✓ Metals/Automotive parts
- ✓ Produce
- ✓ Museums and artifacts
- ✓ Diagnostics



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# Humitector® Humidity Indicator Cards

## *Commercial (Reversible)*

*Industries: Non-military, non-JEDEC*

Commercial Humidity Indicator cards are designed for customers and applications that do not require compliance with military specifications, such as monitoring the humidity levels in or around museum cases, artifacts, collectibles, house plants and other items. The cards can be customized to include the customer's name and/or logo for enhanced brand identity. Commercial cards that monitor the temperature inside the package, in addition to relative humidity levels, are also available.

## *Humitector Maximum (Irreversible)*

*Industries: Logistics/Transportation/Shipping*

Humitector Maximum Humidity Indicator Cards offer a simple, cost-effective and accurate method of recording the maximum relative humidity level reached during storage or transport. Each level of humidity is represented by a blue crystal that dissolves to create a large blue spot that clearly indicates the relative humidity level that has been reached. Custom printed cards that include company names and logos, as well as product-specific "ideal range" humidity markings, are also available.

Süd-Chemie's humidity indicator cards are ideal for use with its full line of desiccant products, including Desi Pak® and Sorb-It® desiccant bags.

For detailed information, including material specifications, please contact Süd-Chemie and request a technical data sheet for the type of card in which you are interested.



Süd-Chemie offers Humitector® Humidity Indicator Cards for use in nearly every industry. Many comply with JEDEC standards for dry packaging of electronics and semiconductors, as well as military specifications Mil-I-8835 and Mil-Std-2073-1D Method 50.

## Usage and Handling

### REVERSIBLE CARDS

#### Usage Requirements

- ▶ Humidity indicator spots change from blue (dry) to pink (humid) as relative humidity changes.
- ▶ Current relative humidity is indicated by a lavender color.
- ▶ Indicator spots will change within eight hours of being exposed to a change in relative humidity.
- ▶ Humidity indicator spots are reversible. Pink spots will change back to blue when the volume of air is dried. Pink or lavender spots can be returned to blue by placing them in a sealed container with one unit (33 grams) of desiccant for 48 hours.
- ▶ The highest humidity indicator spot should be blue before the card is put to use.
- ▶ The humidity indicator card will be at its most accurate when used at a temperature of 73°F (23°C).
- ▶ Avoid contact with indicator spots. Wash any irritated areas with clean water.

### Storage and Handling

- ▶ When storing, keep indicators in their original container, sealed with a desiccant if possible.
- ▶ Replace desiccant after container is opened three times.
- ▶ Store in a cool, dry area.
- ▶ Keep indicators away from water or steam.
- ▶ Keep away from ammonia gases, which will render the indicators useless.

### MAXIMUM/IRREVERSIBLE CARDS

#### Usage Requirements

- ▶ Each level of humidity is represented by a blue crystal.
- ▶ The blue crystal will dissolve into an unmistakable large blue spot when its indicated humidity level has been reached for more than 24 hours.

### Storage and Handling

- ▶ When storing, keep indicators in their original container.
- ▶ Do not open individual bags until ready for use.
- ▶ Store in a cool, dry area.