

# Cobalt Free HI Cards

## Purpose

To offer the electronics and semiconductor industries an environmentally friendly Cobalt Free Humidity Indicator (HI) card.

## What are they?

Cobalt Free HI Cards provide humidity level indication for dry packaging to electronic and semiconductor manufacturers who desire a card without cobalt.

## Why use them?

Many products are highly sensitive to moisture. In order to constantly verify that dry packaging methods are not compromised during storage and transport of these products, humidity indicator cards allow users along the supply chain to monitor the package conditions.

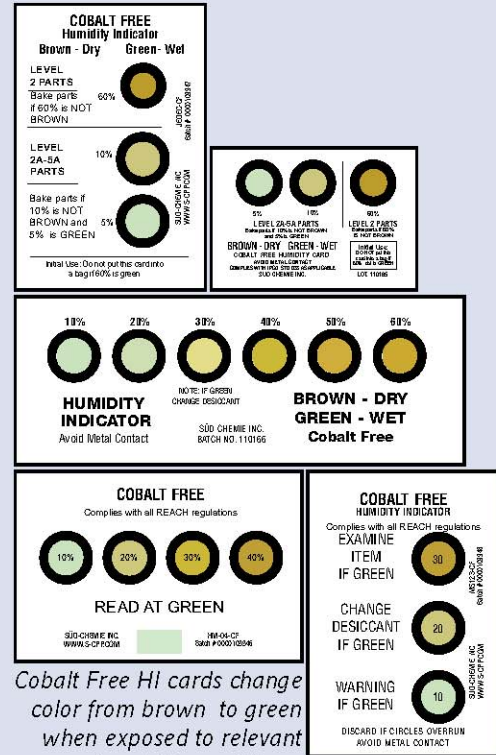
Indicator spots change from brown to green after exposure to the relevant relative humidity conditions. The cards are reversible and change as conditions change in the packaging environment, allowing users to monitor the conditions of product packaging.

The environmentally friendly Cobalt Free HI cards do not contain cobalt and some configurations can be produced with less than 900 ppm halogen levels where required.

## Available configurations

Cobalt Free HI Cards are available in all standard configurations and humidity ranges, including indications at 5, 10 and 60 percent relative humidity levels.

AGM continues to offer a full range of blue-to-pink Cobalt-Dichloride based humidity indicator cards and Cobalt-Dichloride Free HI cards that are also in full compliance with relevant JEDEC standards and ECB regulatory, reporting and labeling requirements.



*Cobalt Free HI cards change color from brown to green when exposed to relevant humidity conditions.*

## Key Advantages

- Cobalt Free Humidity Indicator Cards are free of Cobalt, a chemical which has classification and labeling requirements under the European Chemical Agency (ECHA) REACH directives
- Meets all relevant ECB/REACH labeling requirements
- Typical applications include the dry packaging of semiconductor and electronic devices
- Most configurations offer less than 900 ppm Halogen levels



# Cobalt Free HI Cards

## Available Configurations

Cobalt Free Humidity Indicator Cards provide visible color change humidity indication for dry packaging applications. Listed below are AGM's standard Cobalt Free HI Cards. Cards can also be customized with specific relative humidity levels, dimensions and print.

### Reversible

| Description       | Indicates (%RH)        | Dimensions (in.) | Dimensions (cm) | Pkg./Approx. Wt.                                |
|-------------------|------------------------|------------------|-----------------|---|
| MS051060-H, CF    | 5, 10, 60              | 1.12" x 1.46"    | 55mm x 30mm     | 200 cards per pint can<br>8000 cards per case   |
| J-STD-033, CF     | 5, 10, 60              | 2" x 3"          | 50.8mm x 76.2mm | 125 cards per pint can<br>5,000 cards per case  |
| MS51015, CF       | 5, 10, 15              | 2" x 3"          | 50.8mm x 76.2mm | 125 cards per pint can<br>5,000 cards per case  |
| HM-04, CF         | 10, 20, 30, 40         | 2" x 3"          | 50.8mm x 76.2mm | 125 cards per pint can<br>5,000 cards per case  |
| AEC826004NE-H, CF | 10, 20, 30, 40, 50, 60 | 4.72" x 1.77"    | 120mm x 45mm    | 200 cards per liter can<br>5,000 cards per case |
| AEC826004NE, CF   | 10, 20, 30, 40, 50, 60 | 1.56" x 4.69"    | 40mm x 119mm    | 200 cards per liter can<br>5,000 cards per case |
| MS123, CF         | 10, 20, 30             | 2" x 3"          | 50.8mm x 76.2mm | 125 cards per pint can<br>5,000 cards per case  |
| MS234, CF         | 20, 30, 40             | 2" x 3"          | 50.8mm x 76.2mm | 125 cards per pint can<br>5,000 cards per case  |
| MS20003-2, CF     | 30, 40, 50             | 2" x 3"          | 50.8mm x 76.2mm | 125 cards per pint can<br>5,000 cards per case  |

AGM Container Controls, Inc.  
3526 E. Fort Lowell Rd., Tucson, AZ, 85716  
Tel: 1-800-995-5590 or 520-881-2130  
[sales@agmcontainer.com](mailto:sales@agmcontainer.com)  
[www.agmcontainer.com](http://www.agmcontainer.com)