

HUMIDITY INDICATING CARDS

www.ams-fa.com

USA

10030 Via de la Amistad, San Diego, California 92154
Phone: +1 (619) 661-5985 Fax: +1 (619) 661-5995
service@ams-fa.com

BRAZIL

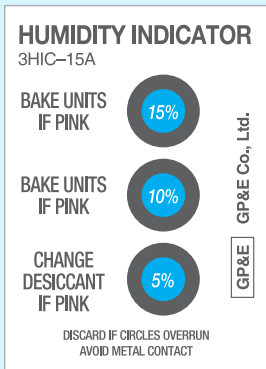
Rua Laerte de Paiva, 344 Bairro Macuco Valinhos-SP-
CEP 13279.451
Phone: +55 (19) 3849-5555 quote@ams-fa.com



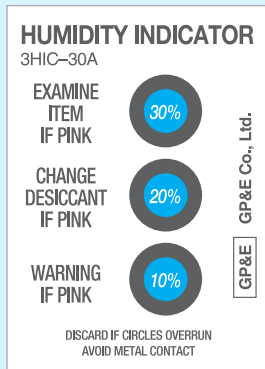
Humidity indicator cards allow fast visual inspection of the relative humidity within sealed packaging and containers. As the humidity increases the chemically impregnated spots change from blue color (DRY) through a lavender, to a pink color (HUMID). This cards meet MIL-I-8835, military specification.

* 3-spot HICs

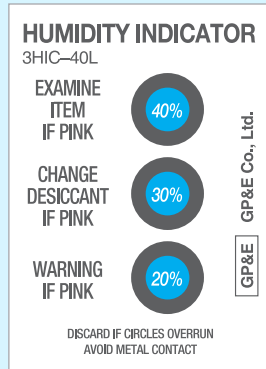
Spec.	Size (mm)	Packing
3HIC-15A	50 x 75	125 pcs/can (40 can/box)
3HIC-30A		
3HIC-40L		
3HIC-50L		
3HIC-40D	59 x 34	
3HIC-50D		



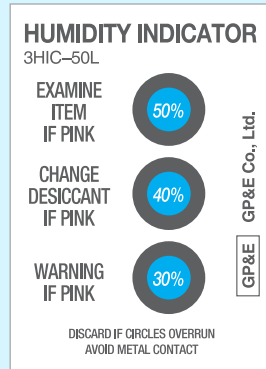
3HIC-15A



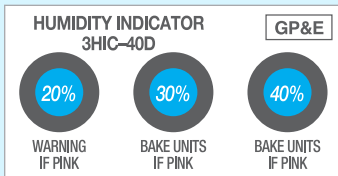
3HIC-30A



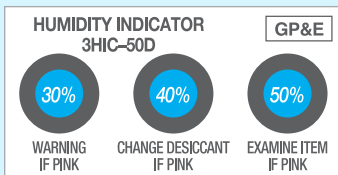
3HIC-40L



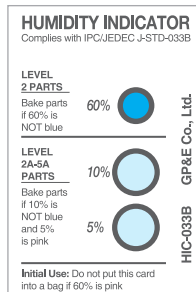
3HIC-50L



3HIC-40D



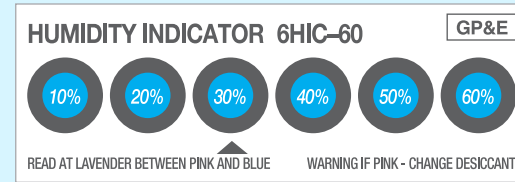
3HIC-50D



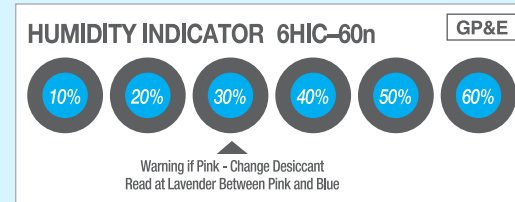
HIC-033B

* 6-spot HICs

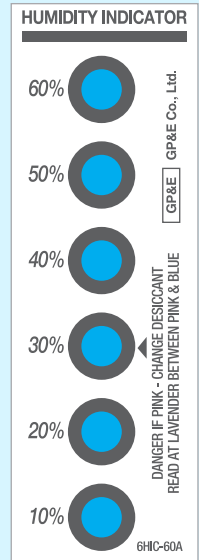
Spec.	Size (mm)	Packing
6HIC-60	116 x 34	200 pcs/can (20 can/box)
6HIC-60N	116 x 40	
6HIC-60A	40 x 119	



6HIC-60



6HIC-60N



6HIC-60A

JEDEC/IPC TO RELEASE REVISION REQUIRING USE OF NEW, QUALITY TESTED HIC IN THE DRY PACKING OF SEMICONDUCTORS

In October 2005, the Joint Electronic Device Engineering Council (JEDEC) and IPC released a new revision of J-STD-033B, the standard governing the use and testing of HICs in the dry packaging of semiconductors.

Whereas previous cards used a 5, 10, and 15 percent relative humidity spot system to indicate humidity exposure levels for moisture sensitive components, the new cards will now feature spots indicating 5, 10, and 60 percent.

CDF-HIC is Cobalt dichloride free humidity indicator cards manufactured by GP&E.

HUMIDITY INDICATOR
Complies with IPC/JEDEC J-STD-033

COBALT DICHLORIDE FREE

LEVEL 2 PARTS
Bake parts if 60% is NOT blue

60%

LEVEL 2A-5A PARTS
Bake parts if 10% is NOT blue and 5% is pink

10%

5%

GP&E Co., Ltd.
CDF-033B Batch #0000021082

Model No. CDF-033B
Size : 50 x 75mm
Indicating : 5, 10, 60 % RH

Initial Use: Do not put this card into a bag if 60% is pink

What is the CDF-HIC?

GP&E has developed Cobalt-dichloride-free (CDF) humidity indicator cards (HICs). CDF-HICs have several advantages;

1. Eco-friendly

- No contains Cobalt dichloride, EU REACH SVHC
- No contains 6 RoHS materials: Cd, Hg, Pb, Cr6+, PBBs, PBDEs

2. Inexpensive

3. Color change

- From BLUE (dry) to PINK (wet)

4. Accuaray

- Meets JEDEC standards: IPC/JEDEC J-STD-033B.1

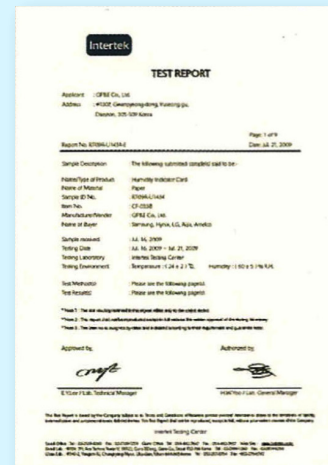
IPC/JEDEC J-STD-033B.1 - Includes Amendment 1 (January 2007)

Table 3-2 Typical HIC Spot Compliance

	Indication at 2% RH Environment	Indication at 5% RH Environment	Indication at 10% RH Environment	Indication at 55% RH Environment	Indication at 60% RH Environment	Indication at 65% RH Environment
5% Spot	Blue (dry)	Lavender (spot value) change $\geq 7\%$ hue	Pink (wet)	Pink (wet)	Pink (wet)	Pink (wet)
10% Spot	Blue (dry)	Blue (dry)	Lavender (spot value) change $\geq 10\%$ hue	Pink (wet)	Pink (wet)	Pink (wet)
60% Spot	Blue (dry)	Blue (dry)	Blue (dry)	Blue (dry)	Lavender (spot value) change $\geq 10\%$ hue	Pink (wet)

Note: Other color schemes may be used.

[Reference of typical HIC spot compliance]
(IPC/JEDEC J-STD-033B.1)



RoHS Report

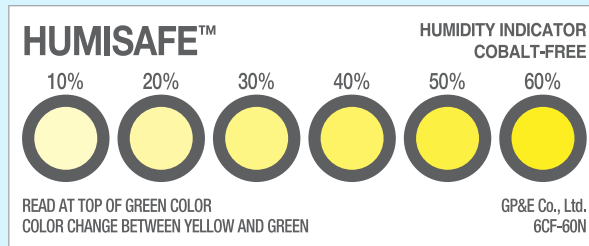


JEDEC Report by Colorimeter Test

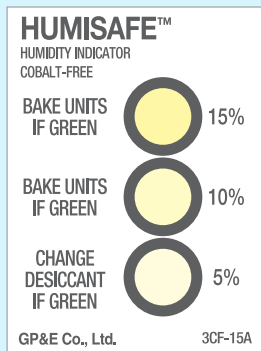


GP&E has developed HUMISAFE™ metal (6-RoHS, cobalt, copper, etc.) free HIC for the use in the European Member States. HUMISAFE™ is a non-toxic, non-hazardous, and environmentally friendly HIC. Moisture sensitive spots respond to various levels of humidity with a visible color change from **YELLOW (DRY)** to **GREEN (WET)**.

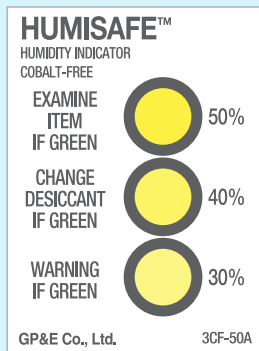
PRODUCTS



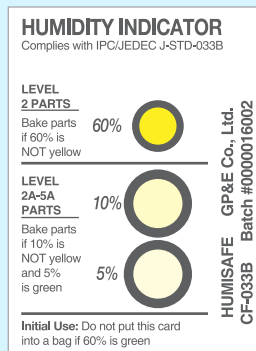
6CF-60N, 115 x 40mm



3CF-15A, 50 x 75mm

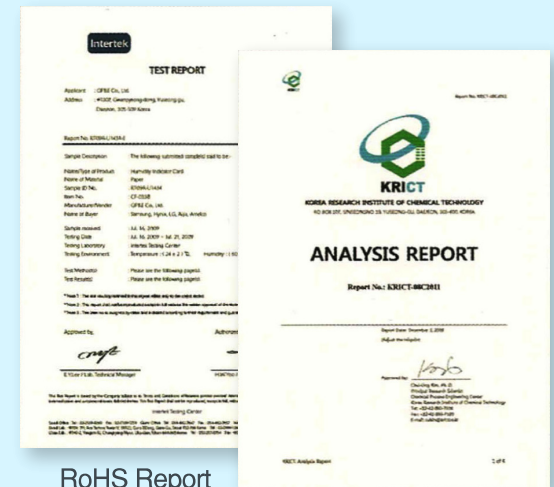


3CF-50A, 50 x 75mm



4CF-033B, 50 x 75mm

CERTIFICATES



RoHS Report

JEDEC Report by Colorimeter Test

※ Full range of HICs which can be customized to meet customer's exact needs are available.