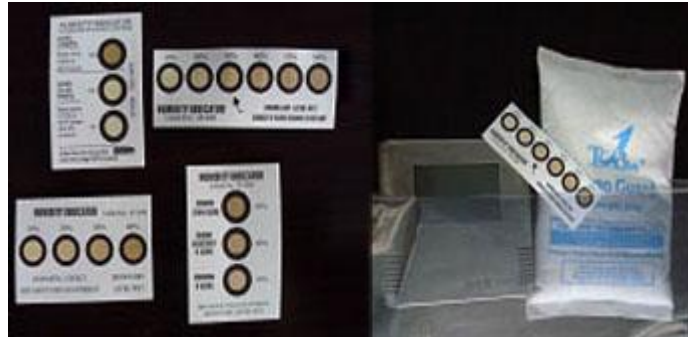




CARGO-DRY®

—Humidity Indicator Card(Cobalt free)



Background

In 1998, the European Community (EC) issued the directive (67/548/EEC) on its 25th council concerning the adaptation to technical progress, on which the cobalt chloride was listed into one of the dangerous substances possibly causing cancer. Though the EC issued it, it was not forbidden formally.

With the technology improvement, people has more concerns of health and safety and higher requirements of environmental protection. Most of the integrated circuit manufacturers agreed that if the traditional humidity indicating method may cause cancer, then it is not applicable, and it shall be eventually replaced by Cobalt-free product.

Then the EC environmental regulation 2004/73/EC came into force, in which cobalt dichloride is listed as a banned material for using.

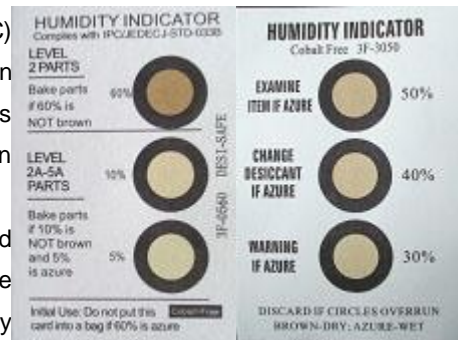
After several years of effort, **TOPSORB** has developed **Humi-Watch+**, a new generation of HIC, which is **cobalt-free** humidity indicating card of high precision, adapting to the new EC standard.

Features:

- * **Cobalt-free, Cl-free**, environmental-friendly, comply with EC standard
- * Easy to use; easy to read; quick to judge humidity value
- * High precision of humidity-sensitivity;
- * Reusable (after drying)

International/national quality standard.

- * 2004/73/EC(EC regulation)
- * GJB2494-95 (P.R.C. Military standard)
- * MIL-I-8835A(U.S.A Military packaging standard)
- * JEDEC(Standard of Joint Electron Device Engineering Council)



RH5%,10%,60% RH30%,40%,50%
(Click to Enlarge it) (Click to Enlarge it)



RH10%,20%,30%,40%,50%,60%
(Click to Enlarge it)



RH10%, 20%,30%,40%(Click to Enlarge it)



Colorchange



Before change—Brown After change—Light blue

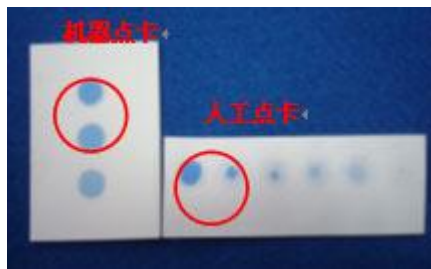
Advanced Production Technology of HIC

Up to now, most domestic suppliers of HIC in China are using burette by hand to drop the solution onto the cards. It is very rough and inefficient with unqualified products at high percentage. It is hard to control the strength precisely by hand when dropping. If no enough dropping, it will not cover full inside the circle print. If too much dropping, it will overflow the circle print.

We produce HIC by automatic machine. Our production efficiency is ten times to hand dropping. What is more, the size and strength of dropping is very precise, perfectly fitting the print circle. It has absolutely overcome the difficulties of uncontrollability of hand dropping.

Comparison

Comparison	By Machine	By Hand
Product Efficiency	High	Low
Labor cost	Low	High
Precision	High	Low
Appearance	Good	Bad



HIC by machine & hand(backside)

Application fields:

Semiconductor/electronic circuit board (PCB) / electronic products / military products/ organic materials / optical devices / metal materials / composite materials / other packages





VI. Specification Sheet

Specification	Size(m m)	Humidity value(RH%)	Package
1H-0020	45*55	RH20%	2500pcs/5pot/cart on
3H-0515	50*76	RH5%,10%,15%	1000pcs/5pot/cart on
3H-1030	50*76	RH10%,20%,30%	1000pcs/5pot/cart on
3H-3050	50*76	RH30%,40%,50%	1000pcs/5pot/cart on
4H-1040	50*76	RH10%, 20%,30%,40%	1000pcs/5pot/cart on
6H-1060	102*38	RH10%,20%,30%,40%,50%,6 0%	1000pcs/5pot/cart on
6H-1060A	120*40	RH10%,20%,30%,40%,50%,6 0%	750pcs/5pot/cart on

Remarks: other specifications can be made according to the customers'special requirement.

V. Storage

*The inner package is PE bag and round metal pot, the outer package is paperboard carton, 1000pcs/5cans/carton Carton size: 500*130*100mm

***Humi-Watch+**® should be sealed in metal pots with desiccant. Desiccant should be replaced after the metal pots being opened for 3 times.

*Store **Humi-Watch+**® in dry and cool environment and prevent it from sunshine and moisture

Contact us



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