



# Dry Packaging Products

Desiccants – Sieve Pak™ • Bentonite Clay • Silica Gel  
Humidity Indicator Cards – Standard • Cobalt Free

# Dou Yee Enterprises



Dou Yee Enterprises is the premier total industrial solutions provider in the Asia Pacific region, serving with distinction the semiconductor, data storage, electronics and biomedical industry since 1982.

We have 39 international branch offices strategically located around the world to give customers the fastest and most accessible products and services. Our manufacturing plants, located in Singapore, Malaysia (Seremban), China (Suzhou) and France are governed by consistent quality systems with ISO 9001:2008 and ISO 14001:2004 certifications.

You can rely on us for products and services that are comprehensive in range, reliable in quality, accessible in location, and backed up by our many years of experience and expertise.

Dou Yee, your preferred partner in the industrial world.



Singapore



Malaysia (Senawang)



China (Suzhou)



France

## Our Test Facilities



To ensure that you are receiving quality products, Dou Yee has the equipment and necessary quality control in place.

We do our own in-house moisture absorption test to ensure that

- Desiccants delivered to you are in good condition and still effective.
- The sealing strength of the bag is strong and the bag does not burst easily, causing spillage of desiccants onto your products.



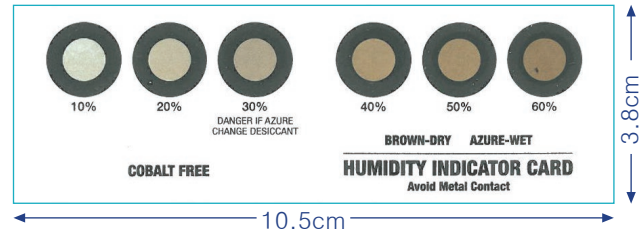
# Humidity Indicator Cards

Humidity indicator cards are used in dry packing for detecting the humidity level in the dry pack environment. The indicating spots on the card are impregnated with a moisture sensitive chemical which will change color upon absorbing moisture. By varying the concentration of this chemical, the color change of the chemical can be controlled at different humidity levels. Thus, by reading the color change on the indicating spots, the user will be able to identify the actual level of humidity in the dry pack environment.

Existing humidity indicator cards found in the market are impregnated with a chemical called cobalt chloride. In the dry state, cobalt chloride is blue in color. After absorbing moisture, cobalt chloride changes to pink color. A recent amendment made to the European CEE directive 67/548, pertaining to the Classification, Packing and Labeling of dangerous materials, has classified cobalt chloride as a carcinogenic material. Improper handling of items containing carcinogen may cause health hazards and environmental hazards, thus, goods containing cobalt chloride will not meet EU standards.

Our new range of humidity indicator cards are carcinogen-free. The indicating spots contain a proprietary chemical which, in the dry state is brown in color. After absorbing moisture, the brown color changes to azure. Specifications will be provided upon request.

## HI-1060



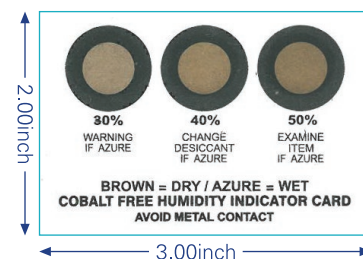
| DESCRIPTION             | CHARACTERISTICS                                |
|-------------------------|--|
| Indicates               | 10%, 20%, 30%, 40%, 50%, 60% relative humidity |
| Material                | Blotting Paper                                 |
| Dimensions              | 10.5cm x 3.8cm                                 |
| Indicating Spots        | 5%, 10%, 60% (left to right)                   |
| Printing                | Heavy Black On White                           |
| Packaging               | 200 pcs per pint can                           |
| Approx. Shipping Weight | 20oz. per can                                  |
| Standards               | Meets Mil-1-8835 & REACH Regulation            |

## HI-051060



| DESCRIPTION             | CHARACTERISTICS                     |
|-------------------------|-------------------------------------|
| Indicates               | 5%, 10%, 60% relative humidity      |
| Material                | Blotting Paper                      |
| Dimensions              | 5.4cm x 3.8cm                       |
| Indicating Spots        | Left<br>Middle<br>Right             |
|                         | 5% RH<br>10% RH<br>60% RH           |
| Printing                | Heavy Black On White                |
| Packaging               | 200 pcs/MBB/CAN                     |
| Approx. Shipping Weight | 15 oz /MBB                          |
| Standards               | Meets Mil-1-8835 & REACH Regulation |

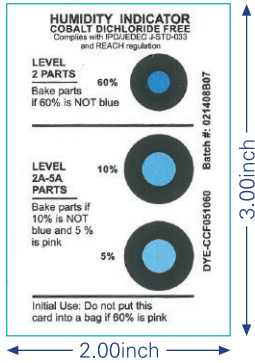
## HI-345-S



| DESCRIPTION             | CHARACTERISTICS               |
|-------------------------|-------------------------------|
| Indicates               | 30% 40% 50% relative humidity |
| Material                | Blotting Paper                |
| Dimensions              | 2.00inch x 3.00inch           |
| Indicating Spots        | 30%, 40%, 50% (left to right) |
| Printing                | Heavy Black On White          |
| Packaging               | 125pcs per pint can           |
| Approx. Shipping Weight | 8oz. per can                  |
| Standards               | Meets JEDEC J-STD-033         |

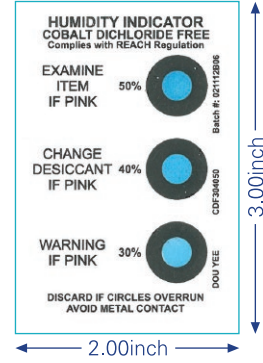
# Humidity Indicator Cards

## DYE-CCF051060



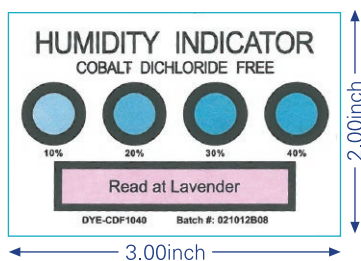
| DESCRIPTION             | CHARACTERISTICS                |
|-------------------------|--------------------------------|
| Indicates               | 5%, 10%, 60% relative humidity |
| Material                | Blotting Paper                 |
| Dimensions              | 2.00inch x 3.00inch            |
| Indicating Spots        | 60%, 10%, 5% (top to bottom)   |
| Printing                | Heavy Black On White           |
| Packaging               | 125pcs per pint can            |
| Approx. Shipping Weight | 8oz. per can                   |
| Standards               | Meets JEDEC J-STD-033          |

## DYE-CDF304050



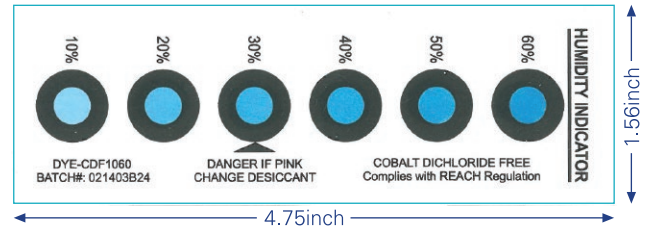
| DESCRIPTION             | CHARACTERISTICS                        |
|-------------------------|--|
| Indicates               | 30%, 40%, 50% relative humidity        |
| Material                | Blotting Paper                         |
| Dimensions              | 2.00inch x 3.00inch                    |
| Indicating Spots        | 50%, 40%, 30% (top to bottom)          |
| Printing                | Heavy Black On White                   |
| Packaging               | 125pcs per pint can                    |
| Approx. Shipping Weight | 8oz. per can                           |
| Standards               | Meets Mil-1-8835 & Mil-P-116 Method II |

## DYE-CDF1040



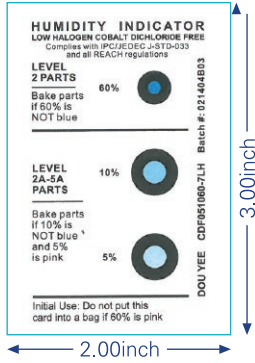
| DESCRIPTION             | CHARACTERISTICS                      |
|-------------------------|--------------------------------------|
| Indicates               | 10%, 20%, 30%, 40% relative humidity |
| Material                | Blotting Paper                       |
| Dimensions              | 3 inch x 2 inch                      |
| Indicating Spots        | 10% - 40% RH                         |
| Printing                | Heavy Black on White                 |
| Packaging               | 125 pcs per pint can                 |
| Approx. Shipping Weight | 8 oz. per can                        |
| Standards               | Meets Mil-I-8835                     |

## DYE-CDF1060



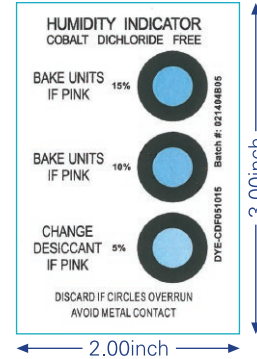
| DESCRIPTION             | CHARACTERISTICS                                |
|-------------------------|--|
| Indicates               | 10%, 20%, 30%, 40%, 50%, 60% relative humidity |
| Material                | Blotting Paper                                 |
| Dimensions              | 1.56inch x 4.75inch                            |
| Indicating Spots        | 10% - 60% RH                                   |
| Printing                | Heavy Black On White                           |
| Packaging               | 200 pcs per pint can                           |
| Approx. Shipping Weight | 20oz. per can                                  |
| Standards               | Meets Mil-1-8835 & Mil-P-116                   |

## CDF051060-7LH



| DESCRIPTION             | CHARACTERISTICS                        |
|-------------------------|--|
| Indicates               | 5%, 10%, 60% relative humidity         |
| Material                | Blotting Paper                         |
| Dimensions              | 2.00inch x 3.00inch                    |
| Indicating Spots        | 60%,10%,5% (top to bottom)             |
| Printing                | Heavy Black On White                   |
| Packaging               | 125pcs per pint can                    |
| Approx. Shipping Weight | 8oz. per can                           |
| Standards               | Meets Mil-1-8835 & Mil-P-116 Method II |

## DYE-CDF051015-LH



| DESCRIPTION             | CHARACTERISTICS                |
|-------------------------|--------------------------------|
| Indicates               | 5%, 10%, 15% relative humidity |
| Material                | Blotting Paper                 |
| Dimensions              | 2.00inch x 3.00inch            |
| Indicating Spots        | 5%, 10%, 15% RH                |
| Printing                | Heavy Black On White           |
| Packaging               | 125pcs per pint can            |
| Approx. Shipping Weight | 8oz. per can                   |
| Standards               | Meets JEDEC J-STD-033          |

# Desiccant Products

Dou Yee can supply molecular sieve, clay or silica gel in various packing material depending on your application and requirements. Our desiccants can be used widely for protecting your goods against harmful effect of moisture and for preventing corrosion. Areas of application includes fry packing for ICs, medical instruments, machine parts, electronic components, optical equipment, tools documents, cameras.



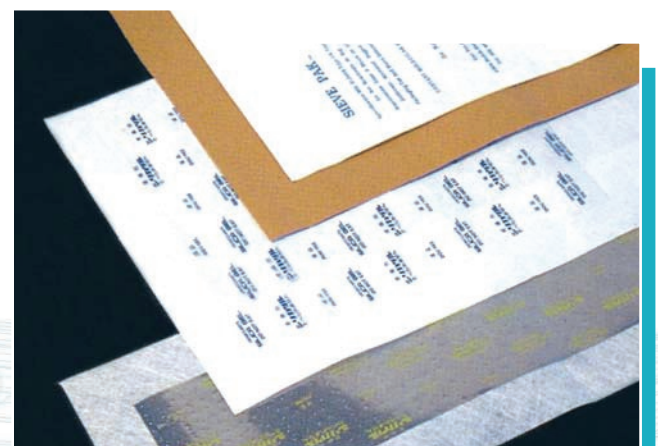
| PROPERTY  | MOLECULAR SIEVE | SILICA GEL | BENTONITE CLAY |
|---|-----------------|------------|----------------|
| Absorptive Capacity at Low H <sub>2</sub> O Concentration | Excellent       | Poor       | Fair           |
| Rate of Absorption  | Excellent       | Good       | Good           |
| Capacity for Water @77°F, 40% RH                          | High            | High       | Medium         |
| Separation by Molecular Sizes                             | Yes             | No         | No             |
| Absorptive Capacity at Elevated Temperatures              | Excellent       | Poor       | Poor           |

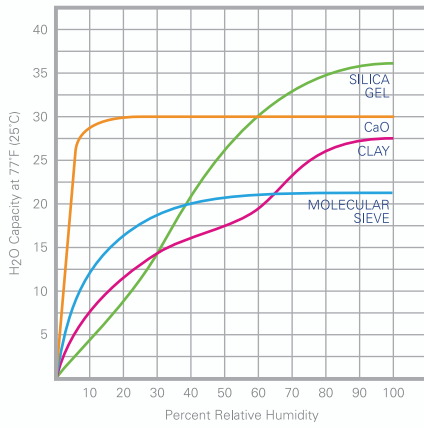
Table 1: Properties of Absorbents

## Packing Materials

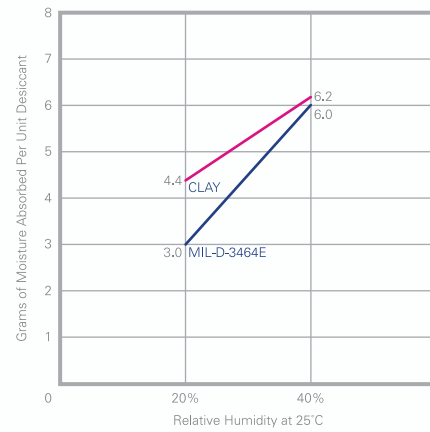
Different types of packaging materials can be used to bag desiccants. In the semiconductor industry, Tyvek® material manufactured by Dupont is commonly used as a bag material for pouching desiccants due to strength, durability and breathability.

Dou Yee can supply desiccants bagged in Tyvek®, Non-woven Fabric, Translucent Static Shielding Film, Clear PP/OPP Film and Kraft paper depending on your requirements. In addition, we also offer our expertise to calculate and recommend the amount of desiccants required for your dry packing.





Graph 1 : Equilibrium Capacity (H<sub>2</sub>O) of Various Absorbents



Graph 2 : Comparison of Clay vs MIL-D-3464

## BENTONITE CLAY

| Product Code                   | Size     | Packing      |
|--------------------------------|----------|--------------|
| DY-TY1-CL-0.50U-85X75MM-P40-3S | 85x75 mm | 500 bags/ctn |
| DY-TY1-CL-1U-115X75MM-P62-3S   | 115x75mm | 400 bags/ctn |
| DY-TY1-CL-2UNIT-5.5X4IN-P27-3S | 5.5x4 in | 150 bags/tin |
| DY-TY1-CL-4UNIT-6.5X4IN-P28-3S | 6.5x4 in | 70 bags/tin  |

PACKING MTRL OPTION: TY1/NW1

## SILICA GEL

| Product Code                  | Size       | Packing       |
|-------------------------------|------------|---------------|
| DY-OP-BR1-5-60X60MM-P01-3S    | 60x60 mm   | 1400 bags/tin |
| DY-OP-BR1-10-70X60MM-P01-3S   | 70x60 mm   | 800 bags/tin  |
| DY-OP-BR1-40-110X75MM-P01-3S  | 110x75 mm  | 300 bags/ctn  |
| DY-OP-BR1-50-120X100MM-P01-3S | 120x100 mm | 150 bags/tin  |

PACKING MTRL OPTION: OP/SF/TY1/NW1/MP

SILICA GEL TYPE OPTION: SGW/BR1/OG1/SW1

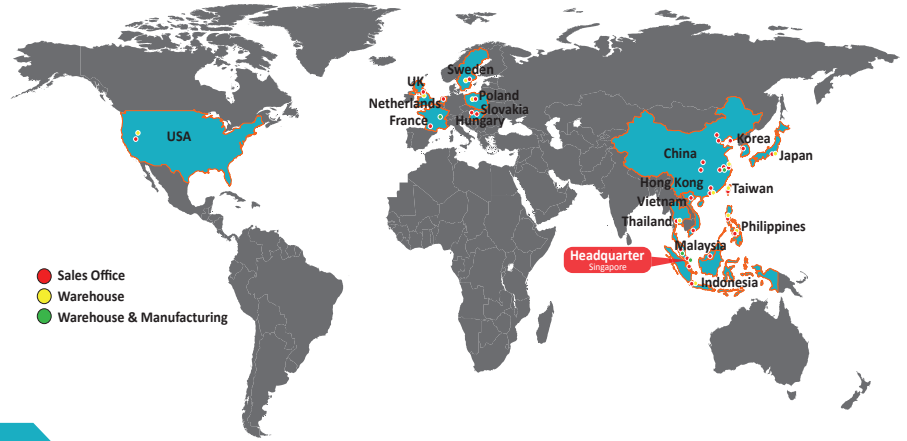
## MOLECULAR SIEVE

| Product Code                | Size       | Packing      |
|-----------------------------|------------|--------------|
| DY-TY1-MS-15-90X75MM-P04-3S | 90x75 mm   | 500 bags/ctn |
| DY-TY-MS-25-100X54MM-P63-PL | 100x54 mm  | 400 bags/tin |
| DY-TY-MS-30-110X54MM-P64-PL | 110x54 mm  | 500 bags/ctn |
| DY-TY-MS-45-115X100MM-3S    | 115x100 mm | 300 bags/ctn |

PACKING MTRL OPTION: TY1/NW1/MP

# Our Network

As a result of globalization, many MNCs are outsourcing suppliers that can provide value added services which include the logistic capability to deliver goods to their factories worldwide. Dou Yee has a credible global network to meet this demand.



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*Global Capability, Local Focus*

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