



# Material Safety Data Sheet

## Humidity Indicator Card, Cobalt dichloride

### SECTION 1: Chemical Product and Company Identification

Date Issued: November 14, 2008  
Product Brand: Humidity Indicator Card  
Manufacturer Name: GP&E Co., Ltd.  
Manufacturer Address: 1307, Gwanpyeong, Yuseong, Daejeon, 305-509, Korea  
Business Phone: 82-42-864-2055, 862-2056~7  
Business Fax: 82-42-863-2055

### SECTION 2: Composition, Information or Ingredients

Composition:

Name	CAS No.	Percent	OSHA PELs	ACGIH TLVs
Blotting Paper	-	> 99.90	-	-
Commercial Ink	-	< 0.05	-	-
Cobalt(II) Chloride	7646-79-9	< 0.07	1 mg/m <sup>3</sup> (TWA) Cobalt metal dust and fume as Co	0.02 mg/m <sup>3</sup> (TWA) as Co

Hazard Symbols: T, N  
Risk Phrases(as CoCl<sub>2</sub>): R49, R22, R42/43, R50/53  
Comments: Impregnated cobalt(II) chloride on the blotting paper

### SECTION 3: Hazards Identification

Appearance and Odor: The product is an odorless, white pulp sheet, black ink and blue to pink humidity indicating spots  
Potential Health Effects: R49 - May cause cancer by inhalation

### SECTION 4: First Aid Measures

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Skin Contact: Wash off with soap and plenty of water.  
Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.  
Ingestion: Give several glasses of water to drink to dilute.

### SECTION 5: Fire-Fighting Measures

Extinguishing Media:	Use extinguishing measures appropriate to the environment.
Unsuitable Media:	None

### SECTION 6: Accidental Release Measures

Spill Cleanup Measures:	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
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### SECTION 7: Handling and Storage

Handling:	No special precautions required
Storage:	Keep in a dry place

### SECTION 8: Exposure Controls, Personal Protection

Personal Protective Equipment Routine Handling:	Prophylactic use of protective ointment (barrier cream) is recommended.
Skin Protection:	Protective gloves
Eye Protection:	Not applicable
Respiratory:	Not applicable
Exposure Limits:	Components with workplace control parameters: cobalt CAS No.: 7440-48-4, Value: 0.5 mg/m <sup>3</sup>

### SECTION 9: Physical and Chemical Properties

Physical Status and Appearance:	Plate cellulosic paper
Color:	Blue to pink, white paper and black print
Odor:	Odorless
pH:	5.0 - 9.0
Solubility in Water:	Partly soluble, max. 700ppm CoCl <sub>2</sub> can be leached out.

### SECTION 10: Stability and Reactivity

Chemical Stability:	Stable
Conditions to Avoid:	Hygroscopic
Materials to Avoid:	Strong-oxidizing agents, Alkali metals
Reformed Hazards when Decomposed:	No decomposition if stored and applied as directed.
Possibility of Toxic Decomposition:	None

### SECTION 11: Toxicological Information

Ingestion Effects:	ACUTE LD50: 766 mg/kg (as cobalt(II) chloride hexahydrate)
Sensitization:	May cause sensitization by skin contact.
Carcinogenicity:	Cobalt and its compounds have been shown to cause cancer in laboratory animals. A3: animal carcinogen (ACGIH TLVs)
Other Toxicological Information:	Not available

### SECTION 12: Ecological Information

Ecotoxicity:	No data available
Environmental Fate:	R50/53 – Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Decomposition:	Not readily biodegradable

### SECTION 13: Disposal Considerations

Waste Disposal:	Dispose as special waste can be landfilled or incinerated, when in compliance with the Environmental protection (Duty of Care) Regulations 1991.
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### SECTION 14: Transport Information

Land Transport:	Not classified as dangerous in the meaning of transport regulations.
Sea Transport:	Not classified as dangerous in the meaning of transport regulations.
Air Transport:	Not classified as dangerous in the meaning of transport regulations.

### SECTION 15: Regulatory Information

Applies to All Ingredients:	The product is classified and labeled in accordance with EC directives or respective national laws.
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### SECTION 16: Other Information

Label Symbol(s):	T – toxic N – dangerous for the environment R49 – May cause cancer by inhalation
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