Section 01 - Product and company identification

Distributor: Uline Shipping Supplies
12575 Uline Drive
Pleasant Prairie, WI 53158
Telephone No.: 1-800-295-5510

Emergency tel. number: 1-800-424-9300(CHEMTREC)

Trade name: HI Card- Uline, 10-60%RH
Material number: 253736
Synonyms: Reversible Humidity Indicator II
Primary product use: Humidity indicator
Chemical family: Humidity Indicator

Section 02 - Hazards identification

Emergency overview: Paper treated with chemical
May cause allergic reaction.

Expected Route of entry:
Inhalation: Route of exposure unlikely
Skin contact: No adverse effects expected.
Sensitive individuals may develop irritation or allergic reaction.
Eye contact: Route of exposure unlikely.
Rubbing eyes after handling material may cause irritation.
Use of proper chemical hygiene should prevent exposure.
Ingestion: Route of exposure unlikely.
Ingestion of large quantities may cause toxic effects.
Skin absorption: Route of exposure unlikely.

Health effects of exposure:
Cobalt Chloride (7646-79-9)
Cobalt dichloride: May cause eye, skin or respiratory tract irritation. Harmful if inhaled or swallowed. May be harmful if absorbed through skin. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Chronic exposure may affect thyroid function and blood clotting. May cause cancer (IARC Group 2B: Possibly carcinogenic to humans). Animal studies showed reproductive effects in females and males. Very toxic to aquatic life with long lasting effects.

Known effects on other illnesses: No known effects on other illnesses for this product.
Listed carcinogen:
IARC: Yes
NTP: No
OSHA: No
Section 03 - Composition/information on ingredients

Hazardous ingredients:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-no. (Trade secret no.)</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobalt Chloride</td>
<td>7646-79-9</td>
<td>&lt; 5 %</td>
</tr>
</tbody>
</table>

Section 04 - First aid measures

After inhalation:
Normally not needed.
No treatment specified.

After contact with skin:
Wash area with mild soap and copious amounts of water.
Consult physician if irritation occurs or if irritation is extensive.

After contact with eyes:
Immediately flush eyes with running water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek prompt medical attention if redness or irritation occurs.

After ingestion:
No emergency care is anticipated.
If large quantities are ingested, call your local Poison Control Center or physician.
Call your local Poison Control Center (In the U.S. call 1-800-222-1222).

Advice to doctor / Treatment:
Chronic ingestion may cause blood abnormalities (polycythemia), increased clotting time, hyperplasia of the bone marrow and thyroid gland, cardiomyopathy, and damage to the pancreas in sensitive individuals.

Section 05 - Fire fighting measures

Flashpoint: not applicable

Hazardous combustion products:
In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO)
Carbon dioxide (CO2)
Hydrogen chloride (HCl)
breathable cobalt/cobalt oxide dust

Extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special fire fighting procedure:
Wear full protective clothing and NIOSH/MSHA-approved positive pressure, self-contained breathing apparatus.
Material will burn in a fire.
Unusual fire and explosion hazards: None known.

Section 06 - Accidental release measures
Steps to be taken in case of spill or leak:
Wearing appropriate personal protective equipment, contain spill and collect into a suitable container.
No special precautions required.
Refer to Section 8 for more information.

Section 07 - Handling and storage
Advice on safe handling:
Use of proper hygiene practices in the work place is recommended.

Further info on storage conditions:
Store in a dry area.

Section 08 - Exposure controls / personal protection
Occupational exposure limits:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS number:</th>
<th>Regulatory list</th>
<th>Type of value</th>
<th>Values / Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobalt inorganic compounds</td>
<td>7646-79-9</td>
<td>US. Threshold Limit Values (TLV) for Chemical Substances in the Work Environment Adopted Values</td>
<td>8-hour, time-weighted average</td>
<td>0.02 mg/m³</td>
</tr>
</tbody>
</table>

Respiratory protection: Follow facility guidelines.
Hand protection: Impervious rubber such as neoprene, nitrile, natural rubber, butyl rubber, PVC, or teflon.
Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Eye protection: Follow facility guidelines in the absence of dusts.
Other protective equipment: Wear protective clothing, including long sleeves and gloves, to prevent skin contact.
Thoroughly wash clothing before reuse.
Use of proper hygiene clothing in the workplace is recommended.
Advice on system design: No special ventilation requirements.

Section 09 - Physical and chemical properties
MATERIAL SAFETY DATA SHEET

HI Card- Uline, 10-60%RH

Substance key: SCIREVHI9001  Revision Date: 06/03/2013
Version : 1 - 0 / USA  Date of printing :06/13/2013

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Solid form</td>
</tr>
<tr>
<td>Color</td>
<td>blue to pink</td>
</tr>
<tr>
<td>Odor</td>
<td>none</td>
</tr>
<tr>
<td>Odor limit</td>
<td>not available</td>
</tr>
<tr>
<td>pH</td>
<td>not determined</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>slightly soluble</td>
</tr>
<tr>
<td>Density</td>
<td>not determined</td>
</tr>
<tr>
<td>Melting point</td>
<td>not determined</td>
</tr>
<tr>
<td>Boiling point</td>
<td>not determined</td>
</tr>
<tr>
<td>Evaporation number</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>Bulk density</td>
<td>not determined</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>not determined</td>
</tr>
<tr>
<td>Partitioning coef. octanol/water</td>
<td>no data available</td>
</tr>
<tr>
<td>Loss on drying</td>
<td>Not Volatile</td>
</tr>
</tbody>
</table>

Section 10 - Stability and reactivity

Chemical stability: Stable.
Hazardous Polymerization: Will not occur.
Conditions to avoid: None known.

Section 11 - Toxicological information

Component information:
Cobalt Chloride (7646-79-9)
Acute oral toxicity: LD50 80 mg/kg (rat)

Section 12 - Ecological information

Remarks:
May cause long lasting harmful effects to aquatic life.
Do not allow to enter ground water, waterways or waste water.

Section 13 - Disposal considerations

Waste disposal information:
This product, if discarded as sold, is not a Federal RCRA hazardous waste.
Processing, use or contamination of this product may change the waste management
options. State and local disposal regulations may differ from federal disposal regulations.

**RCRA hazardous waste:**
This product, if discarded as sold, is not a Federal RCRA hazardous waste.
RCRA number: NONE

### Section 14 - Transport information

<table>
<thead>
<tr>
<th>DOT</th>
<th>not restricted</th>
</tr>
</thead>
<tbody>
<tr>
<td>IATA</td>
<td>not restricted</td>
</tr>
<tr>
<td>IMDG</td>
<td>not restricted</td>
</tr>
</tbody>
</table>

### Section 15 - Regulatory information

**TSCA Status:**
All components of this product are listed or excluded from listing on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) Inventory.

**SARA (section 311/312):**
- Reactive hazard: no
- Pressure hazard: no
- Fire hazard: no
- Immediate/acute: yes
- Delayed/chronic: yes

**SARA 313 information:**
This product contains the chemical or chemicals listed below which are subject to the supplier notification requirements of Section 313 of the Superfund Amendments and Reauthorization Act of 1986 ("SARA") and the requirements of 40 CFR Part 372:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-no. (Trade secret no.)</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobalt compound</td>
<td></td>
<td>&lt; 5 %</td>
</tr>
<tr>
<td>Cobalt (and inorganic compounds as Co)</td>
<td>7440-48-4</td>
<td>&lt; 2.3 %</td>
</tr>
</tbody>
</table>

**Clean Water Act:**
Contains no known priority pollutants at concentrations greater than 0.1%.

**CERCLA information:**
Contains ingredient(s) listed under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 40 CFR 302., The metal compound(s) listed below is considered to be a CERCLA hazardous substance and may be subject to CERCLA/Superfund liability., However, there is no specific listed CERCLA reportable quantity for the generic metal compound(s).

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS no.</th>
<th>Percentage</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobalt Compounds</td>
<td></td>
<td>&lt; 5 %</td>
<td>0</td>
</tr>
</tbody>
</table>
State regulatory information:
This product does not contain chemical(s) known to the state of California to cause cancer, birth defects, or reproductive harm.

NFPA:

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

This information is supplied under the OSHA Hazard Communication Standard, 29 CFR 1910.1200, and is offered in good faith based on data available to us that we believe to be true and accurate. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable to the material. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate for that use. No warranty, express or implied, is made regarding the accuracy of this data, the hazards connected with the use of the material, or the results to be obtained from the use thereof. We assume no responsibility for damage or injury from the use of the product described herein. Data provided here are typical and not intended for use as product specifications.