



**Warning word: Danger**

| Hazard information   | Description of precaution   |
|--|---|
| <b>Harmful if swallowed</b><br><b>Fatal if inhaled</b><br><b>Causes serious eye irritation</b><br><b>May cause allergy or asthma symptoms or breathing difficulties if inhaled</b><br><b>May cause an allergy skin reaction</b><br><b>Suspected of causing cancer</b><br><b>May damage fertility or the unborn child</b><br><b>Causes damage to organs (respiratory organs)</b><br><b>Causes damage to organs through prolonged or repeated exposure(respiratory organs, heart, thyroid, blood system, reproductive organs (male))</b><br><b>Very toxic to aquatic life</b><br><b>Very toxic to aquatic life with long lasting effects</b> | Obtain special instructions. Read and understand all safety precautions before handling.<br>Wear protective gloves/protective clothing/ eye protection/ respiratory protection / face protection during handling.<br>Avoid breathing dust/fume/vapors. Do not eat, drink or smoke when using this product, and wash hands thoroughly after handling.<br>Take off the contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace.<br>Use only outdoors or in well-ventilated area.<br>Avoid release to the environment and collect spillage<br>IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.<br>IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.<br>Rinse mouth.<br>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>IF ON SKIN: Remove immediately all contaminated clothing and rinse skin with water/shower. Then wash skin with plenty of soap and water. If skin irritation occurs, get medical advice/attention.<br>Immediately call a POISON CENTER or doctor/physician.<br>Call a POISON CENTER or doctor/physician if you feel unwell.<br>Protect from sunlight. Store in a cool, dry and well-ventilated place. Keep container tightly closed.<br>Store locked up.<br>Dispose of contents/ container in accordance with local / national regulations. |

### Section 3. Composition / information on ingredients

|                               |                  |
|-------------------------------|------------------|
| Chemical or common name:      | Cobalt           |
| Chemical formula:             | Co               |
| Single Substance or Compound: | Single substance |
| Composition:                  | 100%             |
| CAS #:                        | 7440-48-4        |
| RTECS#:                       | GF8750000        |
| TSCA inventory :              | listed           |
| EINECS:                       | 2311580          |

### Section 4. First aid measures

|               |   |
|---------------|---|
| Eye contact:  | Promptly wash eyes with plenty of water while lifting the eye lids.<br>Continue to rinse for at least 15 minutes and get medical attention. |
| Skin contact: | Promptly flush contaminated skin with soap or mild detergent and water.<br>Contact physician if irritation continues.                       |
| Inhalation:   | Remove the exposed person immediately and provide fresh air.<br>Get medical attention.  |
| Ingestion:    | Rinse mouth and throat with water. Get medical attention immediately.   |

### Section5. Fire fighting measures

|                      |  |
|----------------------|--|
| Extinguishing media: | The product is not combustible.<br>Use media appropriate for surrounding fire.                                       |
| Fire fighting        | Self-contained breathing apparatus and full protective clothing should be used, if the material is involved in fire. |

### Section 6. Accidental release measures

|                       |   |
|-----------------------|---|
| Personal Precautions: | Workers should use protective wears to prevent contact with the spilt adhesive and inhalation of its vapor/dusts. |
|-----------------------|---|



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**Environmental hazard precautions:**

Shut off leak if without risk.

Prevent flow out to river, etc. so as not to badly affect.

**Method for containment and cleaning up:**

Indoor leakage: Ventilate as much as possible until the cleaning is completed.

Outdoor leakage: Work from the windward and evacuate the leeward crowd.

Gather up, pack in closed DOT-approved waste container as much as possible.

Carefully collect remnant and move to a safe place.

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**Section 7. Handling and storage****Precautions to be taken in handling:**

Safe handling: Use protective wears and local ventilation equipment, if inhalation or skin contact is foreseen.

Avoid prolonged or repeated exposure.

**Precautions to be taken in storage:**

General precautions: Store the material in a sealed container.

Store in a cool, dry, well ventilated and dark place away from incompatible materials.

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**Section 8. Exposure controls / personal protection****Exposure guideline:**

| Chemical Name | ACGIH(2024)               | OSHA(2006)                |
|---------------|---------------------------|---------------------------|
|               | TLV-TWA mg/m <sup>3</sup> | PEL-TWA mg/m <sup>3</sup> |
| Cobalt        | 0.02(I)                   | 0.1                       |

I ; Inhalable fraction

Facility measures: Local ventilation of closed work room or total proper ventilation to prevent inhalation.

Protective ware: Wear appropriate NIOSH/MSHA-approved respirator, safety goggles, protective gloves, protective wear, protective boots etc.

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**Section 9. Physical and chemical properties**

Color and Form: Grayish white metal

Chemical formula: Co

Formula weight: 58.93

Melting point: 1495 °C

Boiling point: 2870 °C

Density: 8.90 g/cm<sup>3</sup>

Solubility in water: Insoluble

Soluble in: Dilute sulfuric acid, dilute nitric acid, hydrochloric acid

Flammability: Non-combustible substance

Oxidation: None

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**Section10. Stability and reactivity**

Stability: Stable in closed container at room temperature.

**Reactivity**

Incompatibility: Strong acids, strong oxidizing agents, acetylene, hydrazine nitrate.

Condition to avoid ; No data available

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**Section11. Toxicological information**Acute toxicity(oral): GHS : Category 4 ; Harmful if swallowed  
Rat LD<sub>50</sub> = 550 mg/kg (AICIS IMAP(2014))

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|                                  |  |    |  |                |               |
|----------------------------------|--|----|--|----------------|---------------|
| Acute toxicity(inhalation-dust): | GHS : Category 1 ; Fatal if inhaled  |    |  |                |               |
| Skin corrosive / irritation:     | GHS : Not classified   |    |  |                |               |
| Serious eye damage / irritation: | GHS : Category 2B ; Causes serious eye irritation  |    |  |                |               |
| Respiratory sensitization:       | GHS : Category 1A ; May cause allergy or asthma symptoms or breathing difficulties if inhaled  |    |  |                |               |
| Skin sensitization:              | GHS : Category 1A ; May cause an allergy skin reaction   |    |  |                |               |
| Germ cell mutagenicity:          | GHS : No data available  |    |  |                |               |
| Carcinogenicity:                 | GHS : Category 2 ; Suspected of causing cancer   |    |  |                |               |
| Carcinogenicity:                 |  |    |  |                |               |
|                                  | Ingredients  |    | ACGIH<br>(2019)  | IARC<br>(2018) | NTP<br>(2016) |
|                                  | Cobalt   |    | A3   | 2A             | R             |
|                                  | ACGIH  | A3 | Confirmed Animal Carcinogen with Unknown Relevance to Humans |                |               |
|                                  | IARC   | 2B | The agent is probably carcinogenic to humans.                |                |               |
|                                  | NTP  | R  | Reasonably Anticipated to be Human Carcinogens               |                |               |
| Reproductive toxicity:           | GHS : Category 1B ; May damage fertility or the unborn child   |    |  |                |               |
| Specific target organ toxicity   |  |    |  |                |               |
| —single exposure:                | GHS : Category 1 ; Causes damage to organs.(respiratory organs)  |    |  |                |               |
| —repeated exposure:              | GHS : Category 1 ; Causes damage to organ through prolonged or repeated exposure. (respiratory organs, heart, thyroid, blood system, reproductive organs (male)) |    |  |                |               |
| Aspiration hazard:               | GHS : No data available  |    |  |                |               |

## Section12. Ecological information

Ecotoxicity:

Hazardous to the aquatic environment

short-term (acute) hazard : GHS : Category 1 ; Very toxic to aquatic life

Algal(Pseudokirchneriella subcapitata);

EC<sub>50</sub>(72h) = 0.144 mg/L(Reach registration data)

long-term (chronic) hazard : GHS : Category 1 ; Very toxic to aquatic life with long lasting effects

Crustacea(Chaetogammarus marinus);

NOEC(28d) = 0.00683 mg/L(Reach registration data)

Hazardous to the ozone layer GHS : No data available

No Freon or Halon

Fish toxicity: See above

Degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

## Section13. Disposal considerations

Disposal method: User of the product should contract with the local government or licensed 'Industrial Waste Haulers' for disposal of waste.

## Section 14. Transport information

UN number: 3077

IATA shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

IATA classification: Class 9 (Miscellaneous dangerous substances and articles)

IATA packing group: III

HS code: 8105.90

Marine pollution: Yes



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**Section 15. Regulatory information**

TSCA inventory: listed.

Please refer to any other local / national measures that may be relevant.

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**Section 16. Other information**

This SDS is for provision of information, and it does not represent a guarantee the properties or safeties of the product.

The information herein is based on the references we could obtained and the present state of our knowledge, however, this SDS does not always cover all information about the product. Some new information or amendments may be added afterwards.

Prior to use, please investigate the laws and regulations of the organization, area and country where the product is to be used. The information is intended to ordinary usage, in case of special handling, sufficient care should be taken.

