1. Identification

1.1. Product identifier

Product No: B0252
Product name: Cobalt Chloride (CoCl2)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use: This product is for research and development only
Uses advised against: No information available

1.3. Details of the supplier of the safety data sheet

Supplier Address:
New England BioLabs
240 County Road
Ipswich, MA 01938
USA

For further information, please contact

Company Phone Number: 978-927-5054, 800-632-5227 (toll free)
Telefax: 978-921-1350
E-mail address: info@neb.com

1.4. Emergency telephone number

Europe: +1 978-380-2125

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008
This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.2. Label elements

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

Hazard statements
This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

2.3. Other hazards

Other hazards: No information available
3. Composition/information on ingredients

3.1 Substances
Not applicable

3.2 Mixtures
The product contains no substances which at their given concentration, are considered to be hazardous to health

Full text of H- and EUH-phrases: see section 16

4. First-aid measures

4.1. Description of first aid measures

Inhalation  Remove to fresh air.
Eye contact  Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact  Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.
Ingestion  Clean mouth with water and drink afterwards plenty of water.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms  No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians  Treat symptomatically.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media  Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media  No information available.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical  No information available.

5.3. Advice for firefighters

Special protective equipment for fire-fighters  Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Personal precautions
  Ensure adequate ventilation.

For emergency responders
  Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions
  See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment
  Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
  Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards
  Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections
  See section 8 for more information. See section 13 for more information.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling
  Ensure adequate ventilation.

General hygiene considerations
  Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions
  Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Risk management methods [RMM]
  The information required is contained in this Safety Data Sheet.

8. Exposure controls/personal protection

8.1. Control parameters

Exposure Limits
  This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL)
  No information available.

Predicted No Effect Concentration (PNEC)
  No information available.

8.2. Exposure controls

Individual protection measures, such as personal protective equipment

Eye/face protection
  Wear safety glasses with side shields (or goggles).
Skin and body protection
Wear suitable protective clothing.

Respiratory protection
No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations
Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls
No information available.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks &amp; Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Colorless</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Mild.</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability or explosive limits</td>
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<td>None known</td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Relative density</td>
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<td>None known</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No data available</td>
<td>None known</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
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<td></td>
</tr>
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</table>

9.2. Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Softening point</td>
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</tr>
<tr>
<td>Molecular weight</td>
<td>No information available</td>
</tr>
<tr>
<td>VOC Content (%)</td>
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</tr>
<tr>
<td>Liquid Density</td>
<td>No information available</td>
</tr>
<tr>
<td>Bulk density</td>
<td>No information available</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

10.1. Reactivity

Product name: Cobalt Chloride (CoCl2)
10.2. Chemical stability

Stability
Stable under normal conditions.

Explosion data
- Sensitivity to mechanical impact: None.
- Sensitivity to static discharge: None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions
None under normal processing.

10.4. Conditions to avoid

Conditions to avoid
None known based on information supplied.

10.5. Incompatible materials

Incompatible materials
None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products
None known based on information supplied.

11. Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

- Inhalation: Specific test data for the substance or mixture is not available.
- Eye contact: Specific test data for the substance or mixture is not available.
- Skin contact: Specific test data for the substance or mixture is not available.
- Ingestion: Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms
No information available.

Numerical measures of toxicity

Acute toxicity

Unknown acute toxicity
- 0 % of the mixture consists of ingredient(s) of unknown toxicity.
- 0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
- 0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
- 0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).
Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation  No information available.
Serious eye damage/eye irritation  No information available.
Respiratory or skin sensitization  No information available.
Germ cell mutagenicity  No information available.
Carcinogenicity  No information available.
Reproductive toxicity  No information available.
STOT - single exposure  No information available.
STOT - repeated exposure  No information available.
Aspiration hazard  No information available.

12. Ecological information

12.1. Toxicity

Ecotoxicity  The environmental impact of this product has not been fully investigated.
Unknown aquatic toxicity  Contains 0 % of components with unknown hazards to the aquatic environment.

12.2. Persistence and degradability

Persistence and degradability  No information available.

12.3. Bioaccumulative potential

Bioaccumulation  No information available.

12.4. Mobility in soil

Mobility in soil  No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment  No information available.

12.6. Other adverse effects

Other adverse effects  No information available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused  Dispose of in accordance with local regulations. Dispose of waste in accordance with
products environmental legislation.
Contaminated packaging Do not reuse empty containers.

14. Transport information

IMDG
14.1 UN number Not regulated
14.2 Proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Marine pollutant Not applicable
14.6 Special Provisions None
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code No information available

RID
14.1 UN/ID No Not regulated
14.2 Proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

ADR
14.1 UN number Not regulated
14.2 Proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

IATA
14.1 UN number Not regulated
14.2 Proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazard Not applicable
14.6 Special Provisions None

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

European Union
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Authorizations and/or restrictions on use:
This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants
Ozone-depleting substances (ODS) regulation (EC) 1005/2009  Not applicable

**International Inventories**

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Contact supplier for inventory compliance status</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
<tr>
<td>ENCS</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
<tr>
<td>IECSC</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
<tr>
<td>KECL</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
<tr>
<td>PICCS</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
<tr>
<td>AICS</td>
<td>Contact supplier for inventory compliance status</td>
</tr>
</tbody>
</table>

**Legend:**

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

**15.2. Chemical safety assessment**

Chemical Safety Report  No information available

**16. Other information**

**Key or legend to abbreviations and acronyms used in the safety data sheet**

Legend

- SVHC: Substances of Very High Concern for Authorization:

Legend  Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>TWA (time-weighted average)</td>
</tr>
<tr>
<td>Ceiling</td>
<td>Maximum limit value</td>
</tr>
<tr>
<td>STEL</td>
<td>STEL (Short Term Exposure Limit)</td>
</tr>
<tr>
<td>*</td>
<td>Skin designation</td>
</tr>
</tbody>
</table>

**Key literature references and sources for data used to compile the SDS**

- Agency for Toxic Substances and Disease Registry (ATSDR)
- U.S. Environmental Protection Agency ChemView Database
- European Food Safety Authority (EFSA)
- EPA (Environmental Protection Agency)
- Acute Exposure Guideline Level(s) (AEGGL(s))
- U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
- U.S. Environmental Protection Agency High Production Volume Chemicals
- Food Research Journal
- Hazardous Substance Database
- International Uniform Chemical Information Database (IUCLID)
- Japan GHS Classification
- Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
- NIOSH (National Institute for Occupational Safety and Health)
- National Library of Medicine's ChemID Plus (NLM CIP)
- National Library of Medicine's PubMed database (NLM PUBMED)
- National Toxicology Program (NTP)
New Zealand’s Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

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978-927-5054
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This safety data sheet complies with the requirements of:

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End of Safety Data Sheet