1 Identification

- **Product name**
- **Trade name:** cis-Dichlorodiammine platinum(II), 99% CISPLATIN
- **Item number:** 78-0450
- **CAS Number:** 15663-27-1
- **EC number:** 239-733-8

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Strem Chemicals, Inc.
    7 Mulliken Way
    NEWBURYPORT, MA 01950
    USA
    info@strem.com
  - **Information department:** Technical Department
  - **Emergency telephone number:**
    EMERGENCY: CHEMTREC: + 1 (800) 424-9300
    During normal opening times: +1 (978) 499-1600

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - GHS06 Skull and crossbones
  - **Acute Tox. 2 H300** Fatal if swallowed.
  - GHS08 Health hazard
  - **Resp. Sens. 1 H334** May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  - **Muta. 1A H340** May cause genetic defects.
  - **Carc. 1B H350** May cause cancer.
  - **Repr. 1A H360** May damage fertility or the unborn child.
  - GHS07
  - **Skin Sens. 1 H317** May cause an allergic skin reaction.

- **Label elements**
  - GHS label elements
  - The substance is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - GHS06
    - GHS08
Trade name: cis-Dichlorodiammine platinum(II), 99% CISPLATIN

- Hazard-determining components of labeling:
  cis-Dichlorodiammineplatinum (II) Cisplatin (USP Grade)

- Hazard statements
  H300 Fatal if swallowed.
  H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  H317 May cause an allergic skin reaction.
  H340 May cause genetic defects.
  H350 May cause cancer.
  H360 May damage fertility or the unborn child.

- Precautionary statements
  P284 [In case of inadequate ventilation] wear respiratory protection.
  P280 Wear protective gloves/protective clothing/eye protection/face protection.
  P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
  P403+P233 Store in a well-ventilated place. Keep container tightly closed.
  P405 Store locked up.
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:
  - NFPA ratings (scale 0 - 4)
    Health = 4
    Fire = 0
    Reactivity = 0

  - HMIS-ratings (scale 0 - 4)
    HEALTH  *3
    FIRE      0
    REACTIVITY 0

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- CAS No. Description
  15663-27-1 cis-Dichlorodiammineplatinum (II) Cisplatin (USP Grade)
- Identification number(s)
- EC number: 239-733-8

4 First-aid measures

- Description of first aid measures
- General information:
  Immediately remove any clothing soiled by the product.
  In case of irregular breathing or respiratory arrest provide artificial respiration.
- After inhalation:
  Supply fresh air and to be sure call for a doctor.
  In case of unconsciousness place patient stably in side position for transportation.
- After skin contact:
  Immediately wash with water and soap and rinse thoroughly.
- After eye contact:
  Rinse opened eye for several minutes under running water. Then consult a doctor.

(Contd. on page 3)
5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
  - Do not allow product to reach sewage system or any water course.
  - Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up:**
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
- **Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
  - **PAC-1:** Substance is not listed.
  - **PAC-2:** Substance is not listed.
  - **PAC-3:** Substance is not listed.

7 Handling and storage

- **Handling:**
  - **Precautions for safe handling**
    - Thorough dedusting.
    - Ensure good ventilation/exhaustion at the workplace.
  - **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
  - **Requirements to be met by storerooms and receptacles:** No special requirements.
  - **Information about storage in one common storage facility:** Store away from foodstuffs.
  - **Further information about storage conditions:** Keep receptacle tightly sealed.
Trade name: cis-Dichlorodiammine platinum(II), 99% CISPLATIN

- Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.

- Control parameters

<table>
<thead>
<tr>
<th>Components with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td>15663-27-1 cis-Dichlorodiammineplatinum (II) Cisplatin (USP Grade)</td>
</tr>
<tr>
<td>PEL Long-term value: 0.002 mg/m³ as Pt</td>
</tr>
<tr>
<td>REL Long-term value: 0.002 mg/m³ as Pt</td>
</tr>
<tr>
<td>TLV Long-term value: 0.002 mg/m³ as Pt</td>
</tr>
</tbody>
</table>

- Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls

- Personal protective equipment:
  - General protective and hygienic measures:
    - Keep away from foodstuffs, beverages and feed.
    - Immediately remove all soiled and contaminated clothing.
    - Wash hands before breaks and at the end of work.
    - Store protective clothing separately.
  - Protection of hands:
    - Protective gloves
      The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
      Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
      Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
    - Material of gloves
      The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
    - Penetration time of glove material
      The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection:
  - Tightly sealed goggles
### 9 Physical and chemical properties

#### General Information

- **Appearance:** Crystalline
- **Color:** Light orange color
- **Odor:** Odorless
- **Odor threshold:** Not determined.
- **pH-value:** Not applicable.

#### Change in condition

- **Melting point/Melting range:** 230 °C (446 °F)
- **Boiling point/Boiling range:** Undetermined.

#### Flammability (solid, gaseous):

- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not determined.

#### Decomposition temperature:

- **Decomposition temperature:** Not determined.

#### Auto igniting:

- **Auto igniting:** Not determined.

#### Danger of explosion:

- **Explosion limits:** Product does not present an explosion hazard.
- **Lower:** Not determined.
- **Upper:** Not determined.

#### Vapor pressure:

- **Vapor pressure:** Not applicable.

#### Density:

- **Density:** Not determined.
- **Relative density:** Not determined.
- **Vapor density:** Not applicable.
- **Evaporation rate:** Not applicable.

#### Solubility in / Miscibility with Water:

- **Water:** Insoluble.

#### Partition coefficient (n-octanol/water):

- **Not determined.**

#### Viscosity:

- **Dynamic:** Not applicable.
- **Kinematic:** Not applicable.

#### Solvent content:

- **Organic solvents:** 0.0 %
- **VOC content:** 0.0 g/l / 0.00 lb/gl

#### Solids content:

- **100.0 %

### 10 Stability and reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** No decomposition if used according to specifications.
- **Thermal decomposition / conditions to be avoided:** No dangerous reactions known.
44.1.1 Conditions to avoid
No further relevant information available.

Incompatible materials:
No further relevant information available.

Hazardous decomposition products:
No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects

Acute toxicity:
Primary irritant effect:
on the skin: No irritant effect.
on the eye: No irritating effect.

Sensitization:
Sensitization possible through inhalation.
Sensitization possible through skin contact.

Additional toxicological information:

Carcinogenic categories

IARC (International Agency for Research on Cancer)

2A

NTP (National Toxicology Program)

R

OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

Additional ecological information:

General notes: Not known to be hazardous to water.

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

Recommendation:
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.
# 14 Transport information

<table>
<thead>
<tr>
<th><strong>UN-Number</strong></th>
<th>UN3288</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DOT, IMDG, IATA</strong></td>
<td>UN proper shipping name</td>
</tr>
<tr>
<td><strong>DOT</strong></td>
<td>Toxic solid, inorganic, n.o.s.</td>
</tr>
<tr>
<td><strong>IMDG, IATA</strong></td>
<td>TOXIC SOLID, INORGANIC, N.O.S.</td>
</tr>
</tbody>
</table>

**Transport hazard class(es)**

<table>
<thead>
<tr>
<th><strong>DOT</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
</tr>
<tr>
<td>Label</td>
</tr>
</tbody>
</table>

**IMDG, IATA**

<table>
<thead>
<tr>
<th><strong>Class</strong></th>
<th>6.1 Toxic substances</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Label</strong></td>
<td>6.1</td>
</tr>
</tbody>
</table>

**Packing group**

| **DOT, IMDG, IATA** | II |

**Environmental hazards:**

| **Marine pollutant:** | No |

**Special precautions for user**

<table>
<thead>
<tr>
<th><strong>Not applicable.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Danger code (Kemler):</strong></td>
</tr>
<tr>
<td><strong>EMS Number:</strong></td>
</tr>
<tr>
<td><strong>Stowage Category</strong></td>
</tr>
</tbody>
</table>

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

| **Not applicable.** |

**Transport/Additional information:**

<table>
<thead>
<tr>
<th><strong>DOT</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity limitations</td>
</tr>
<tr>
<td>On passenger aircraft/rail: 25 kg</td>
</tr>
<tr>
<td>On cargo aircraft only: 100 kg</td>
</tr>
</tbody>
</table>

**IMDG**

<table>
<thead>
<tr>
<th><strong>Limited quantities (LQ)</strong></th>
<th>.5 kg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Excepted quantities (EQ)</strong></td>
<td></td>
</tr>
<tr>
<td>Code: E4</td>
<td></td>
</tr>
</tbody>
</table>

| Maximum net quantity per inner packaging: 1 g |
| Maximum net quantity per outer packaging: 500 g |

**UN "Model Regulation":**

| UN 3288 TOXIC SOLID, INORGANIC, N.O.S., 6.1, II |
15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Sara
    - Section 355 (extremely hazardous substances):
      Substance is not listed.
    - Section 313 (Specific toxic chemical listings):
      Substance is not listed.
  - TSCA (Toxic Substances Control Act):
    Substance is listed.
  - Proposition 65 WARNING. Proposition 65 - https://www.p65warnings.ca.gov/
    - Chemicals known to cause cancer:
      Substance is listed.
    - Chemicals known to cause reproductive toxicity for females:
      Substance is not listed.
    - Chemicals known to cause reproductive toxicity for males:
      Substance is not listed.
    - Chemicals known to cause developmental toxicity:
      Substance is not listed.
  - Carcinogenic categories
    - EPA (Environmental Protection Agency)
      Substance is not listed.
    - TLV (Threshold Limit Value established by ACGIH)
      Substance is not listed.
    - NIOSH-Ca (National Institute for Occupational Safety and Health)
      Substance is not listed.
  - GHS label elements
    The substance is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms
    - GHS06
    - GHS08

- Signal word Danger

- Hazard-determining components of labeling:
  cis-Dichlorodiammineplatinum (II) Cisplatin (USP Grade)
  - Hazard statements
    H300 Fatal if swallowed.
    H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
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  - Precautionary statements
    P284 [In case of inadequate ventilation] wear respiratory protection.
Trade name: cis-Dichlorodiammine platinum(II), 99% CISPLATIN

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· National regulations:
- Additional classification according to Decree on Hazardous Materials:
  Carcinogenic hazardous material group I (extremely dangerous).
  Carcinogenic hazardous material group II (very dangerous).
  Carcinogenic hazardous material group III (dangerous).

- Information about limitation of use:
Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing SDS: Technical Department.
- Contact: Technical Director
- Date of preparation / last revision 02/15/2022 / -
- Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  ACGIH: American Conference of Governmental Industrial Hygienists
  EINECS: European Inventory of Existing Commercial Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFFA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  VOC: Volatile Organic Compounds (USA, EU)
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  NIOSH: National Institute for Occupational Safety
  OSHA: Occupational Safety & Health
  TLV: Threshold Limit Value
  PEL: Permissible Exposure Limit
  REL: Recommended Exposure Limit
  Acute Tox. 2: Acute toxicity – Category 2
  Resp. Sens. 1: Respiratory sensitisation – Category 1
  Skin Sens. 1: Skin sensitisation – Category 1
  Muta. 1A: Germ cell mutagenicity – Category 1A
  Carc. 1B: Carcinogenicity – Category 1B
  Repr. 1A: Reproductive toxicity – Category 1A