SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

· Trade name: Di-µ-chloro-dichlorobis(ethylene)diplatinum (II), min. 97% Zeise's dimer

· Item number: 78-0460

· EC number: 235-144-5

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

No further relevant information available.

1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier:
  Strem Chemicals, Inc.
  7 Mulliken Way
  NEWBURYPORT, MA 01950
  USA
  info@strem.com

· Further information obtainable from: Technical Department

1.4 Emergency telephone number:

EMERGENCY: CHEMTREC: + 1 (800) 424-9300
During normal opening times: +1 (978) 499-1600

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS07

Skin Irrit. 2  H315  Causes skin irritation.
Eye Irrit. 2  H319  Causes serious eye irritation.
STOT SE 3  H335  May cause respiratory irritation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labelled according to the CLP regulation.

2.3 Hazard pictograms

GHS07

· Signal word Warning

Hazard-determining components of labelling:
Di-µ-chloro-dichlorobis(ethylene)diplatinum(II), min. 97% Zeise's dimer

Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Chemical characterisation: Substances

CAS No. Description

Di-µ-chloro-dichlorobis(ethylene)diplatinum(II), min. 97%
Zeise's dimer

Identification number(s)

EC number: 235-144-5

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation: 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. If symptoms persist, consult a doctor.

After swallowing:
Immediately wash with water and soap and rinse thoroughly. If symptoms persist, consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed
No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

5.2 Special hazards arising from the substance or mixture
No further relevant information available.

5.3 Advice for firefighters

Protective equipment: No special measures required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Not required.

6.2 Environmental precautions
No special measures required.

6.3 Methods and material for containment and cleaning up:
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

6.4 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.
SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
  No special precautions are necessary if used correctly.
  
  **Handling:** Handle under inert gas.
  
  **Information about fire - and explosion protection:**
  No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**
  
  **Storage:**
  Keep cool.
  Store contents under inert gas.

· **Requirements to be met by storerooms and receptacles:**
  No special requirements.

· **Information about storage in one common storage facility:**
  Not required.

· **Further information about storage conditions:**
  Keep container tightly sealed.

· **Recommended storage temperature:**
  Store at temperatures not exceeding -18 °C. Keep cool.

· **7.3 Specific end use(s)**
  No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:**
  No further data; see item 7.

· **8.1 Control parameters**
  
  **Ingredients with limit values that require monitoring at the workplace:**
  Not required.

· **Additional information:**
  The lists valid during the making were used as basis.

· **8.2 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.
  Avoid contact with the eyes and skin.

· **Respiratory protection:**
  In case of brief exposure or low pollution use respiratory filter device.
  In case of intensive or longer exposure use self-contained respiratory protective device.

· **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.
### 9.1 Information on basic physical and chemical properties

#### General Information

**Appearance:** Crystalline

**Colour:** Orange

**Odour:** Odourless

**Odour threshold:** Not determined.

**pH-value:** Not applicable.

**Change in condition**

- **Melting point/freezing point:** Undetermined.
- **Initial boiling point and boiling range:** Undetermined.

**Flammable (solid, gas):** Not determined.

**Ignition temperature:**

- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Not determined.

**Explosive properties:**

- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.

**Vapour pressure:** Not applicable.

**Density:** Not determined.

**Relative density**

**Vapour density**

**Evaporation rate**

**Solubility in / Miscibility with water:** Insoluble.

**Partition coefficient: n-octanol/water:** Not determined.

**Viscosity:**

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

**Solvent content:**

- **Organic solvents:** 0.0 %
- **VOC (EC):** 0.00 %

**Solids content:** 100.0 %

### 10.1 Reactivity

No further relevant information available.

(Contd. of page 3)
SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Based on available data, the classification criteria are not met.

Primary irritant effect:

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/irritation
Causes serious eye irritation.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Based on available data, the classification criteria are not met.

Reproductive toxicity Based on available data, the classification criteria are not met.

STOT-single exposure
May cause respiratory irritation.

STOT-repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability
No further relevant information available.

12.3 Bioaccumulative potential
No further relevant information available.

12.4 Mobility in soil
No further relevant information available.

Additional ecological information:

General notes: Not known to be hazardous to water.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

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

Uncleaned packaging:

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

14.1 UN-Number
- ADR, ADN, IMDG, IATA: not regulated

14.2 UN proper shipping name
- ADR, ADN, IMDG, IATA: not regulated

14.3 Transport hazard class(es)
- ADR, ADN, IMDG, IATA: not regulated
- Class: not regulated

14.4 Packing group
- ADR, IMDG, IATA: not regulated

14.5 Environmental hazards:
- Marine pollutant: No

14.6 Special precautions for user
- Not applicable.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
- Not applicable.

UN "Model Regulation": not regulated

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I Substance is not listed.

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

SECTION 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

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
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3