

SAFETY DATA SHEET

Preparation Date: No data available

Revision Date: 04/15/2015

Revision Number: G1

Product identifier

Product code: C1230
Product Name: CHLOROPLATINIC ACID, HEXAHYDRATE, CRYSTAL, REAGENT, ACS

Other means of identification

Synonyms:

Chloroplatinic acid
Chloroplatinic (IV) acid
Dihydrogen hexachloroplatinate
Dihydrogen hexachloroplatinate(2-)
Hexachloroplatinic acid
Hexachloroplatinic(4+) acid, hydrogen-
Hexachloroplatinic(IV) acid
Hydrogen hexachloroplatinate(4+)
Hydrogen hexachloroplatinate(IV)
Platinum chloride (H₂PtCl₆)
Speier's catalyst
Platinate(2-), hexachloro-, dihydrogen (8Cl)
Platinate(2-), hexachloro-, dihydrogen, (OC-6-11)-
Platinate(2-), hexachloro-, hydrogen (1:2), (OC-6-11)-
Acid platonic chloride
Acide chloroplatinique, solide (French DOT)
Acido cloroplatinico, solido (Spanish DOT)
Hydrogen hexachloroplatinate(IV)
Hydrogen platinum chloride (H₂PtCl₆)
Platinic chloride
CAS #: 16941-12-1
RTECS # TP1500000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: Electroplating; etching Zinc for printing; making dyes and catalyst; in microscopy.
Uses advised against No information available

Supplier: Spectrum Chemicals and Laboratory Products, Inc.
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 3
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3

Label elements

Danger

Hazard statements

Toxic if swallowed
Causes severe skin burns and eye damage
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
May cause respiratory irritation



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing should not be allowed out of the workplace
Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

Specific treatment (see .? on this label)
Immediately call a POISON CENTER or doctor/physician
Specific treatment (see .? on this label)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.

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IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Wash contaminated clothing before reuse
 If skin irritation or rash occurs: Get medical advice/attention
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Call a POISON CENTER or doctor/physician if you feel unwell.
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 Rinse mouth
 Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret
Chloroplatinic Acid, Hexahydrate 16941-12-1	16941-12-1	100	*

4. FIRST AID MEASURES

First aid measures

General Advice:

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126).

Skin Contact:

Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Get medical attention. Call a physician immediately.

Eye Contact:

Flush eye with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention. Call a physician immediately.

Most important symptoms and effects, both acute and delayed

Symptoms

Causes severe skin burns. Causes eye damage. Toxic if swallowed. May cause irritation of respiratory tract. May cause allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Indication of any immediate medical attention and special treatment needed

Notes to Physician:

Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:	If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.
Unsuitable Extinguishing Media:	No information available.
<u>Specific hazards arising from the chemical</u>	
Hazardous Combustion Products:	No information available.
Specific hazards:	Nonflammable
<u>Special Protective Actions for Firefighters</u>	
Specific Methods:	No information available.
Special Protective Equipment for Firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing dust. Avoid dust formation. Ensure adequate ventilation.

Environmental precautions Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers.

Methods and material for containment and cleaning up

Methods for containment Cover with plastic sheet to prevent spreading.

Methods for cleaning up Use appropriate tools to put the spilled solid in a suitable waste disposal container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Solid materials may result in the formation of combustible dusts.

Safe Handling Advice:

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid formation of dust and aerosols. Do not breathe vapours/dust. Do not ingest. When using do not smoke. Keep away from combustible material. Use only in well-ventilated areas. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep containers tightly closed in a dry, cool and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents. Alkalis. Cyanides. sulfides.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Chloroplatinic Acid, Hexahydrate - 16941-12-1	None	None	None	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
Chloroplatinic Acid, Hexahydrate - 16941-12-1	None	None	None	None

Australia and Mexico

Components	Australia	Mexico
Chloroplatinic Acid, Hexahydrate 16941-12-1	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

- Eye protection:** Safety glasses with side-shields.
- Skin and body protection:** Full Suit. Gloves.
- Respiratory protection:** Effective dust mask. Be sure to use an approved/certified respirator or equivalent..
- Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical state: Solid.	Appearance: Crystalline.	Color: Yellow. Reddish-Brown.
Odor: No information available	Taste No information available	Molecular/Formula weight: 517.91 g/mol
Formula: H ₂ PtCl ₆ -6H ₂ O	Flash point (°C): No data available	Flashpoint (°C/°F): No information available.
Flash Point Tested according to: Not available	Lower Explosion Limit (%): No information available	Upper Explosion Limit (%): No information available
Autoignition Temperature (°C/°F): No information available	pH: No information available	Melting point/range(°C/°F): 60°C/ 140°F
Boiling point/range(°C/°F): No information available	Decomposition temperature(°C/°F): No information available	Bulk density: No information available
Specific gravity: 2.431	Vapor pressure @ 20°C (kPa): No information available	Density (g/cm³): No information available
Evaporation rate: No information available	Vapor density: No information available	VOC content (g/L): No information available
Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available	Viscosity: No information available
Miscibility: No information available	Solubility: Soluble in cold water	

10. STABILITY AND REACTIVITY

Reactivity

Reactive with metals
Reactive with alkalis
Incompatible with cyanides and sulfides

Chemical stability

Stability: Moisture Sensitive. Hygroscopic. Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Incompatible materials. Exposure to moisture. Exposure to light.

Incompatible Materials: Oxidizing agents. Alkalis. Cyanides. sulfides.

Hazardous decomposition products: Hydrogen chloride. Platinum chloride.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product code: C1230

Product name: CHLOROPLATINIC
ACID, HEXAHYDRATE, CRYSTAL,
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Principal Routes of Exposure:
Skin. Eyes. Ingestion. Inhalation.

Acute Toxicity

Component Information

Chloroplatinic Acid, Hexahydrate - 16941-12-1

- LD50/oral/rat** = No information available
- LD50/oral/mouse** = No information available
- LD50/dermal/rat** = No information available
- LD50/dermal/rabbit** = No information available
- LC50/inhalation/rat** = No information available
- LC50/inhalation/mouse** = No information available
- Other LD50 or LC50 information** = 49 mg/kg LD50 Intrv. Rat
29097 mg/kg LD50 Intra. Mouse

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Causes skin irritation.

Eye Contact: Causes eye irritation.

Inhalation Causes irritation of the respiratory tract with possible burns.
Ingestion It can cause nausea, vomiting, hypermotility, diarrhea. Can burn the mouth, throat, stomach. It may affect behavior (tremors, dizziness, headache, tiredness).

Aspiration hazard No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Repeated or prolonged skin contact may cause skin sensitization. Prolonged or repeated inhalation may cause asthma-like allergy and asthma attacks with shortness of breath, wheezing, coughing, and/or chest tightness.

Sensitization: No information available

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic

Components	ACGIH - Carcinogens	IARC	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Chloroplatinic Acid, Hexahydrate	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

Reproductive toxicity No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available

STOT - repeated exposure No information available

Target Organs: Lungs. Mucous membrane. Skin. Eyes.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Chloroplatinic Acid, Hexahydrate	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN2507
Proper Shipping Name: Chloroplatinic acid, solid
Hazard Class: 8
Subsidiary Risk:
Packing Group: III
ERG No: 154
Marine Pollutant: No data available
DOT RQ (lbs): No information available

Symbol(s):

TDG (Canada)

UN-No: UN2507
Proper Shipping Name: Chloroplatinic acid, solid
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

ADR

UN-No: UN2507
Proper Shipping Name: Chloroplatinic acid, solid
Hazard Class: 8
Packing Group: III
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG

UN-No: UN2507
Proper Shipping Name: Chloroplatinic acid, solid
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Description: No information available
IMDG Page: No information available
Marine Pollutant: No information available
EMS: F-A
MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: UN2507
Proper Shipping Name: Chloroplatinic acid, solid
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III

Product code: C1230

Product name: CHLOROPLATINIC ACID, HEXAHYDRATE, CRYSTAL, REAGENT, ACS

14. TRANSPORT INFORMATION

Classification Code: No information available
Description: No information available

ICAO

UN-No: UN2507
Proper Shipping Name: Chloroplatinic acid, solid
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

IATA

UN-No: UN2507
Proper Shipping Name: Chloroplatinic acid, solid
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 8L
Description: No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Chloroplatinic Acid, Hexahydrate</i>	Present	Present KE-18416	Present	Present (1)-223 (1)-1145	Present	Present	Present 241-010-7

U.S. Regulations

Chloroplatinic Acid, Hexahydrate

New Jersey RTK Hazardous Substance List: 0406

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>Chloroplatinic Acid, Hexahydrate</i>	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
<i>Chloroplatinic Acid, Hexahydrate</i>	None	None	None	None	None

U.S. TSCA

Product code: C1230

Product name: CHLOROPLATINIC ACID, HEXAHYDRATE, CRYSTAL, REAGENT, ACS

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Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Chloroplatinic Acid, Hexahydrate	Not Applicable	Not Applicable

Canada

WHMIS hazard class:

Non-controlled

Chloroplatinic Acid, Hexahydrate

D2A D2B E

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Chloroplatinic Acid, Hexahydrate	0.1 %

Inventory

Components	Canada (DSL)	Canada (NDSL)
Chloroplatinic Acid, Hexahydrate	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Chloroplatinic Acid, Hexahydrate	Not listed	Not listed

EU Classification

R-phrase(s)

R25 - Toxic if swallowed.

R34 - Causes burns.

R42/43 - May cause sensitization by inhalation and skin contact.

S -phrase(s)

S22 - Do not breathe dust.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 1/2 - Keep locked up and out of the reach of children.

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Components	Classification	Concentration Limits:	Safety Phrases
Chloroplatinic Acid, Hexahydrate	T; R25 C; R34 R42/43	No information	S1/2 S22 S26 S36/37/39 S45

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

T - Toxic

C - Corrosive.

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Product name: CHLOROPLATINIC
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16. OTHER INFORMATION

Revision Date: 04/15/2015
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet