

Material Safety Data Sheet

Chloroplatinic acid hydrate

ACC# 04841

Section 1 - Chemical Product and Company Identification

MSDS Name: Chloroplatinic acid hydrate

Catalog Numbers: AC195370000, AC195370010, AC195370050, AC363590000, AC363590010, AC405010000, AC405010010, AC405010050, P154-1, P154-10

Synonyms: Dihydrogen hexachloroplatinate hydrate; Platinat(2-), hexachloro-, dihydrogen, hydrate; Platinic chloride hydrate; Hydrogen hexachloroplatinate(IV) hydrate.

Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
16941-12-1	Chloroplatinic acid anhydrous	99	241-010-7
18497-13-7	Chloroplatinic acid hexahydrate	ref	unlisted
26023-84-7	Platinat(2-), hexachloro-, dihydrogen, hydrate	ref	unlisted

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: orange-brown powder and chunks.

Danger! Causes eye and skin burns. Causes digestive and respiratory tract burns. May cause severe allergic respiratory reaction. Harmful if swallowed. May cause allergic skin reaction.

Target Organs: Lungs, eyes, skin, mucous membranes.

Potential Health Effects

Eye: Causes eye burns.

Skin: May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May cause severe irritation and possible burns.

Ingestion: Harmful if swallowed. May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns.

Inhalation: May cause allergic respiratory reaction. May cause severe respiratory tract irritation. May cause asthma and shortness of breath.

Chronic: Repeated exposure may cause allergic respiratory reaction (asthma). Exposure may cause platinosis, a morbid condition resulting from exposure to soluble platinum salts, with involvement of the upper respiratory tract and allergic manifestations of the skin. Platinosis is considered to be a progressive, allergic reaction following exposure to platinum salts, leading to pronounced asthmatic symptoms.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

Ingestion: If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Not flammable, but reacts with most metals to form flammable hydrogen gas.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Inform laundry personnel of contaminant's hazards. Use only with adequate ventilation or respiratory protection.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture. Store protected from heat and direct sunlight. Sometimes packaged under dry nitrogen.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Chloroplatinic acid anhydrous	0.002 mg/m3 TWA (as Pt) (listed under Platinum soluble salts).	0.002 mg/m3 TWA (as Pt) (listed under Platinum soluble salts).4 mg/m3 IDLH (as Pt) (listed under Platinum soluble salts).	0.002 mg/m3 TWA (as Pt) (listed under Platinum soluble salts).
Chloroplatinic acid hexahydrate	0.002 mg/m3 TWA (as Pt) (listed under Platinum soluble salts).	0.002 mg/m3 TWA (as Pt) (listed under Platinum soluble salts).4 mg/m3 IDLH (as Pt) (listed under Platinum soluble salts).	0.002 mg/m3 TWA (as Pt) (listed under Platinum soluble salts).
Platinate(2-), hexachloro-, dihydrogen, hydrate	0.002 mg/m3 TWA (as Pt) (listed under Platinum soluble salts).	0.002 mg/m3 TWA (as Pt) (listed under Platinum soluble salts).4 mg/m3 IDLH (as Pt) (listed under Platinum soluble salts).	0.002 mg/m3 TWA (as Pt) (listed under Platinum soluble salts).

OSHA Vacated PELs: Chloroplatinic acid anhydrous: No OSHA Vacated PELs are listed for this chemical. Chloroplatinic acid hexahydrate: No OSHA Vacated PELs are listed for this chemical. Platinate(2-), hexachloro-, dihydrogen, hydrate: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Powder and chunks

Appearance: orange-brown

Odor: none reported

pH: Not available.

Vapor Pressure: Negligible.

Vapor Density: Not available.

Evaporation Rate: Negligible.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 60 deg C

Decomposition Temperature: Not available.

Solubility: Freely Soluble.

Specific Gravity/Density: 2.43

Molecular Formula: H₂Cl₆Pt.xH₂O

Molecular Weight: 409.81

Section 10 - Stability and Reactivity

Chemical Stability: Stable. Deliquescent (tending to absorb atmospheric water vapor and become liquid).

Conditions to Avoid: Light, dust generation, moisture, heat, confined spaces.

Incompatibilities with Other Materials: Metals, strong bases, cyanides, sulfides.

Hazardous Decomposition Products: Hydrogen chloride, chlorine.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:**CAS#** 16941-12-1: TP1500000**CAS#** 18497-13-7: TP1510000**CAS#** 26023-84-7: unlisted.**LD50/LC50:**

Not available.

Not available.

Not available.

Carcinogenicity:**CAS#** 16941-12-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.**CAS#** 18497-13-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.**CAS#** 26023-84-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.**Epidemiology:** Occupational exposures to soluble complex salts of platinum, but not elemental platinum, have caused progressive allergic reactions that led to pronounced asthmatic symptoms. Skin sensitization has also occurred.**Teratogenicity:** No data available.**Reproductive Effects:** No data available.**Mutagenicity:** See RTECS TP1500000.**Neurotoxicity:** No data available.**Other Studies:****Section 12 - Ecological Information**

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.**RCRA U-Series:** None listed.**Section 14 - Transport Information**

	US DOT	Canada TDG
Shipping Name:	CHLOROPLATINIC ACID, SOLID	CHLOROPLATINIC ACID SOLID
Hazard Class:	8	8
UN Number:	UN2507	UN2507
Packing Group:	III	III

Section 15 - Regulatory Information**US FEDERAL****TSCA****CAS#** 16941-12-1 is listed on the TSCA inventory.**CAS#** 18497-13-7 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).**CAS#** 26023-84-7 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).**Health & Safety Reporting List**

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes**CAS #** 16941-12-1: immediate, delayed.**CAS #** 18497-13-7: immediate, delayed.**CAS #** 26023-84-7: immediate, delayed.**Section 313** No chemicals are reportable under Section 313.**Clean Air Act:**

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 16941-12-1 can be found on the following state right to know lists: California, (listed as Platinum soluble salts), New Jersey, Pennsylvania, (listed as Platinum soluble salts), Minnesota, (listed as Platinum soluble salts).

CAS# 18497-13-7 can be found on the following state right to know lists: California, (listed as Platinum soluble salts), Pennsylvania, (listed as Platinum soluble salts), Minnesota, (listed as Platinum soluble salts).

CAS# 26023-84-7 can be found on the following state right to know lists: California, (listed as Platinum soluble salts), Pennsylvania, (listed as Platinum soluble salts), Minnesota, (listed as Platinum soluble salts).

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T C

Risk Phrases:

R 25 Toxic if swallowed.

R 34 Causes burns.

R 42/43 May cause sensitization by inhalation and skin contact.

Safety Phrases:

S 22 Do not breathe dust.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 16941-12-1: No information available.

CAS# 18497-13-7: No information available.

CAS# 26023-84-7: 2

Canada - DSL/NDSL

CAS# 16941-12-1 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of E, D2A.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 16941-12-1 is listed on the Canadian Ingredient Disclosure List.

CAS# 18497-13-7 (listed as Platinum soluble salts) is listed on the Canadian Ingredient Disclosure List.

CAS# 26023-84-7 (listed as Platinum soluble salts) is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997

Revision #6 Date: 12/08/2004

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.