

SAFETY DATA SHEET

Creation Date 06-Apr-2010

Revision Date 24-Dec-2021

Revision Number 6

1. Identification

Product Name Hexachloroplatinic(IV) acid hydrate
Cat No. : P154-1, P154-10
CAS No 26023-84-7
Synonyms Hexachloroplatinic acid hydrate; Platinic chloride hydrate
Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

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

Corrosive to metals	Category 1
Acute oral toxicity	Category 2
Skin Corrosion/Irritation	Category 1 B
Serious Eye Damage/Eye Irritation	Category 1
Respiratory Sensitization	Category 1
Skin Sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	
Specific target organ toxicity - (repeated exposure)	Category 1
Target Organs - Kidney.	

Label Elements

Signal Word
Danger

Hazard Statements

May be corrosive to metals
 Fatal if swallowed
 Causes severe skin burns and eye damage
 May cause respiratory irritation
 May cause an allergic skin reaction
 May cause allergy or asthma symptoms or breathing difficulties if inhaled
 Causes damage to organs through prolonged or repeated exposure

**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
 Keep only in original container

Response

Immediately call a POISON CENTER or doctor/physician

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin

IF ON SKIN (or hair): 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

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Ingestion

Rinse mouth
 Do NOT induce vomiting

Spills

Absorb spillage to prevent material damage

Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed
 Store in corrosive resistant polypropylene container with a resistant inliner
 Store in a dry place

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Very toxic to aquatic life with long lasting effects

3. Composition/Information on Ingredients

Component	CAS No	Weight %
Hydrogen hexachloroplatinate(IV) hydrate	26023-84-7	>95
Chloroplatinic acid	16941-12-1	-

4. First-aid measures

General Advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Eye Contact	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately.
Most important symptoms and effects	Causes burns by all exposure routes. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	CO ₂ , dry chemical, dry sand, alcohol-resistant foam.
Unsuitable Extinguishing Media	DO NOT USE WATER
Flash Point	No information available
Method -	No information available
Autoignition Temperature	No information available
Explosion Limits	
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

The product causes burns of eyes, skin and mucous membranes. Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous Combustion Products

Platinum oxide. Carbon monoxide (CO). Carbon dioxide (CO₂). Hydrogen chloride gas.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health
4

Flammability
0

Instability
2

Physical hazards
W

6. Accidental release measures

Personal Precautions	Use personal protective equipment as required. Evacuate personnel to safe areas. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid dust formation.
Environmental Precautions	Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Should not be released into the environment.

Methods for Containment and Clean Up Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

7. Handling and storage

Handling	Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not ingest. If swallowed then seek immediate medical assistance. Do not breathe (dust, vapor, mist, gas). Avoid dust formation.
Storage.	Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from water or moist air. Protect from direct sunlight. Incompatible Materials. Strong oxidizing agents.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Hydrogen hexachloroplatinate(IV) hydrate	TWA: 0.002 mg/m ³	(Vacated) TWA: 0.002 mg/m ³	IDLH: 4 mg/m ³ TWA: 0.002 mg/m ³	TWA: 0.002 mg/m ³
Chloroplatinic acid	TWA: 0.002 mg/m ³	(Vacated) TWA: 0.002 mg/m ³	IDLH: 4 mg/m ³ TWA: 0.002 mg/m ³	TWA: 0.002 mg/m ³

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures	Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.
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Personal Protective Equipment

Eye/face Protection	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. Tight sealing safety goggles. Face protection shield.
Skin and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory Protection	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.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid Powder
Appearance	Amber
Odor	Odorless
Odor Threshold	No information available

pH	No information available
Melting Point/Range	60 °C / 140 °F
Boiling Point/Range	No information available
Flash Point	No information available
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Specific Gravity	No information available
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	H ₂ Cl ₆ Pt . x H ₂ O
Molecular Weight	409.82

10. Stability and reactivity

Reactive Hazard	Yes
Stability	Light sensitive. Moisture sensitive.
Conditions to Avoid	Incompatible products. Excess heat. Exposure to light. Exposure to moisture.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Platinum oxide, Carbon monoxide (CO), Carbon dioxide (CO ₂), Hydrogen chloride gas
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrogen hexachloroplatinate(IV) hydrate	195 mg/kg (Rat)	Not listed	Not listed
Chloroplatinic acid	25-200 mg/kg (Rat)	Not listed	Not listed

Toxicologically Synergistic Products No information available

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

Irritation	Causes burns by all exposure routes
Sensitization	May cause sensitization by inhalation and skin contact
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Hydrogen hexachloroplatinate(IV) hydrate	26023-84-7	Not listed	Not listed	Not listed	Not listed	Not listed
Chloroplatinic acid	16941-12-1	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects	No information available
Reproductive Effects	No information available.
Developmental Effects	No information available.
Teratogenicity	No information available.
STOT - single exposure	Respiratory system
STOT - repeated exposure	Kidney
Aspiration hazard	No information available
Symptoms / effects,both acute and delayed	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
Endocrine Disruptor Information	No information available
Other Adverse Effects	The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not allow material to contaminate ground water system.

Persistence and Degradability	based on information available. May persist
Bioaccumulation/ Accumulation	No information available.
Mobility	Will likely be mobile in the environment due to its water solubility.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No	UN2507
Proper Shipping Name	CHLOROPLATINIC ACID, SOLID
Hazard Class	8
Packing Group	III

TDG

UN-No	UN2507
Proper Shipping Name	CHLOROPLATINIC ACID, SOLID
Hazard Class	8
Packing Group	III

IATA

UN-No	UN2507
Proper Shipping Name	CHLOROPLATINIC ACID, SOLID
Hazard Class	8
Packing Group	III

IMDG/IMO

UN-No	UN2507
Proper Shipping Name	CHLOROPLATINIC ACID, SOLID
Hazard Class	8

Packing Group III

15. Regulatory information

United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Hydrogen hexachloroplatinate(IV) hydrate	26023-84-7	-	-	-
Chloroplatinic acid	16941-12-1	X	ACTIVE	-

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Hydrogen hexachloroplatinate(IV) hydrate	26023-84-7	-	-	-	-	-	-	-	X	-
Chloroplatinic acid	16941-12-1	X	-	241-010-7	X	X	X	X	X	KE-18416

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)**U.S. Federal Regulations**

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Hydrogen hexachloroplatinate(IV) hydrate	-	-	X	-	X
Chloroplatinic acid	-	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade

No information available

Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Hydrogen hexachloroplatinate(IV) hydrate	-	Use restricted. See item 75. (see link for restriction details)	-
Chloroplatinic acid	-	Use restricted. See item 75. (see link for restriction details)	-

<https://echa.europa.eu/substances-restricted-under-reach>

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

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Hydrogen hexachloroplatinate(IV) hydrate	26023-84-7	Not applicable	Not applicable	Not applicable	Not applicable
Chloroplatinic acid	16941-12-1	Not applicable	Not applicable	Not applicable	Not applicable

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Hydrogen hexachloroplatinate(IV) hydrate	26023-84-7	Not applicable	Not applicable	Not applicable	Not applicable
Chloroplatinic acid	16941-12-1	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

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Revision Summary

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS