**1. Product And Company Identification**

**Supplier**
DF Goldsmith Chemical and Metal  
909 Pitner Avenue  
Evanston, IL 60202, USA

**Telephone Number:** 847-869-7800  
**FAX Number:** 847-869-2531  
**E-mail:** goldchem@aol.com  
**Web Site:** www.dfgoldsmith.com

**Manufacturer**
DF Goldsmith Chemical and Metal  
909 Pitner Avenue  
Evanston, IL 60202, USA

**Telephone Number:** 847-869-7800  
**FAX Number:** 847-869-2531  
**E-mail:** goldchem@aol.com  
**Web Site:** www.dfgoldsmith.com

**Supplier Emergency Contacts & Phone Number**
Chemtrac: 800-424-9300

**Issue Date:** 09/16/2010

**Product Name:** Dihydrogen Hexachloroplatinum (IV) Hydrate  
**Chemical Name:** Chloroplatinic Acid, Platinic Acid  
**CAS Number:** 26023-84-7  
**Chemical Family:** Platinum Group Metal Salts  
**Chemical Formula:** H2PtCl6.xH2O  
**MSDS Number:** 15-052  
**Product Code:** 15-052

**Synonyms**
ACS Grade - CAS # 18497-13-7  
Chloroplatinic Acid, Platinic Chloride Hydrate, Hexachloroplatinic Acid Hydrate  
Commercial Grade - CAS # 16941-12-1

**2. Composition/Information On Ingredients**

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS Number</th>
<th>Percent Of Total Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dihydrogen Hexachloroplatinum (IV) Hydrate (Chloroplatinic Acid)</td>
<td>26023-84-7</td>
<td>99-100</td>
</tr>
</tbody>
</table>

**EMERGENCY OVERVIEW**

**TOXIC.**  
**TOXIC IF SWALLOWED, CAUSE BURNS. MAY CAUSE SENSITIZATION BY INHALATION AND SKIN CONTACT.**

**HAZARDS IDENTIFICATION (PICTOGRAMS)**
## Dihydrogen Hexachloroplatinum (IV) Hydrate

### 3. Hazards Identification

**Primary Route(s) Of Entry**

- **Eyes:** Likely
- **Inhalation:** Likely
- **Skin:** Likely
- **Ingestion:** Likely

**Eye Hazards**

CAUSE BURNS TO THE EYE.

**Skin Hazards**

CAUSE BURNS, AND MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.

**Ingestion Hazards**

TOXIC IF SWALLOWED.

**Inhalation Hazards**

MATERIAL IS EXTREMELY DESTRUCTIVE TO THE TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT. MAY BE HARMFUL IF INHALED.

**Signs And Symptoms**

INHALATION MAY RESULT IN SPASM, INFLAMMATION AND EDEMA OF THE LARYNX AND BRONCHI. CHEMICAL PNEUMOITIS AND PULMONARY EDEMA.

**Conditions Aggravated By Exposure**

ANY RESPIRATORY CONDITION SUCH AS ASTHMA, MAY LEAD TO PLATINOSIS FROM PLATINUM COMPOUNDS.

**Conditions Aggravated By Overexposure**

THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES OF THIS COMPOUND HAVE NOT BEEN THOROUGHLY INVESTIGATED.

### 4. First Aid Measures

**Eye**

FLUSH FOR 15 MINUTES WITH COPIOUS AMOUNTS OF WATER SEPARATING UPPER AND LOWER EYELIDS WITH FINGERS. IF SYMPTOMS DEVELOP OR PERSIST CONTACT A PHYSICIAN IMMEDIATELY.

**Skin**

IN CASE OF CONTACT WITH SKIN, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES AND WASH BEFORE REUSE. CONTACT PHYSICIAN IMMEDIATELY.

**Ingestion**

IF INGESTED, WASH OUT MOUTH WITH WATER PROVIDED THE VICTIM IS CONSCIOUS. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. CALL A PHYSICIAN IMMEDIATELY.

**Inhalation**

IF INHALED, REMOVE TO FRESH AIR. IF VICTIM IS NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN IMMEDIATELY.
5. Fire Fighting Measures

**Flash Point:** NA °C  
**Autoignition Point:** NA °C  
**Flammability Class:** NA

**Fire And Explosion Hazards**  
CAN EMIT TOXIC FUMES UNDER FIRE CONDITIONS.

**Extinguishing Media**  
SUITABLE: WATER SPRAY. CO2, DRY CHEMICAL POWDER, OR APPROPRIATE FOAM.

**Fire Fighting Instructions**  
WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

6. Accidental Release Measures

EVACUATE AREA IMMEDIATELY. WHEN CLEANING UP WEAR SCBA, RUBBER BOOTS, AND HEAVY RUBBER GLOVES. SWEEP UP AND PLACE IN A BAG AND HOLD FOR HAZARDOUS WASTE DISPOSAL. VENTILATE AREA WELL AND WASH SPILL SITE AFTER PICKUP IS FINISHED.

7. Handling and Storage

**Handling Precautions**  
DO NOT BREATHE DUST. DO NOT GET INTO EYES, ON SKIN, ON CLOTHING. AVOID PRLONGED OR REPEATED EXPOSURE.

**Storage Precautions**  
KEEP TIGHTLY CLOSED. STORE IN A DRY COOL PLACE. THIS PRODUCT IS LIGHT AND MOISTURE SENSITIVE. STORE UNDER NITROGEN.

**Work/Hygienic Practices**  
Use good personal hygiene. Wash thoroughly with soap and water after handling.

**Other Precautions**  
0.01 ppm high efficiency particular respirator/supplied air respirator/self-contained breathing apparatus; 0.2 ppm same as above with full face piece; 1 ppm powdered air purifying respirator with high efficiency filter/type C supplied air respirator operated in pressure demand mode. Store in a sealed container, plastic or plastic liner, in a cool, well ventilated, dry area away from volatile acids.
## 8. Exposure Controls/Personal Protection

### Engineering Controls

- **Ventilation:** Local Exhaust: Required in handling area  
  Mechanical: Desirable to insure concentration of material below TLV/TWA levels  
  Other: Closed ventilation system (Laboratory fume hood)

### Eye/Face Protection

ANSI approved safety glasses/goggles, full face shield

### Skin Protection

Rubber/Neoprene (use compatible chemical-resistant gloves)

### Respiratory Protection

NIOSH approved chemical cartridge respirator for acid gas or self-contained breathing apparatus with full face shield.

### Other/General Protection

Lab coat/apron, flame and chemical resistant protective clothing, eye wash, safety shower, and hygiene facilities for washing

### Ingredient(s) - Exposure Limits

Dihydrogen Hexachloroplatinum (IV) Hydrate (Chloroplatinic Acid)  
ACGIH - 0.002 MG (PT)/M³ for TWA  
MSHA STANDARD -air - 0.002 MG (PT)/ M³ FOR TWA  
OSHA PEL - 8 HOUR TWA 0.002 MG (PT)/M³

## 9. Physical And Chemical Properties

### Appearance

Brownish-yellow to orange red deliquescent crystals.

- **Chemical Type:** Mixture  
- **Physical State:** Solid  
- **Melting Point:** 60 °C  
- **Boiling Point:** NA °C  
- **Specific Gravity:** 2.43 G/CM³  
- **Molecular Weight:** 409.82 Anhydrous  
- **Vapor Pressure:** NA  
- **Vapor Density:** NA  
- **pH Factor:** NA  
- **Solubility:** SOLUBLE IN WATER  
- **Evaporation Rate:** NA
10. Stability And Reactivity

**Stability:** MAY DECOMPOSE ON EXPOSURE TO LIGHT, TO MOIST AIR OR WATER  
**Hazardous Polymerization:** WILL NOT OCCUR

**Conditions To Avoid (Stability)**  
MAY DECOMPOSE ON EXPOSURE TO LIGHT. MAY DECOMPOSE ON EXPOSURE TO MOIST AIR OR WATER.

**Incompatible Materials**  
BASES

**Hazardous Decomposition Products**  
HYDROGEN CHLORIDE GAS, PLATINUM OXIDE.

**Conditions To Avoid (Polymerization)**  
WILL NOT OCCUR.

11. Toxicological Information

**Ingredient(s) - Toxicological Data**  
Dihydrogen Hexachloroplatinum (IV) Hydrate (Chloroplatinic Acid)  
INTRAVENOUS - RAT - 49 MG/KG  
LD 50  
REMARKS: SENSE ORGANS AND SPECIAL SENSES (NOSE, EYE, EAR, AND TASTE): OLFACTION  
OTHER CHANGES, BEHAVIORAL, TREMOR, GASTROINTESTINAL, HYPERMOTILITY, DIARRHEA.  
INTRAPERITONEAL

**Ingredient(s) - Toxicological Data - Continued**  
MOUSE  
29097 MG/KG  
LD 50  
Intravenous:  Rat  
49 MG/KG  
LD 50  
Remarks: Sense organs and special senses (nose, eye, ear, and taste)  
Olfaction: Other changes.  
Behavioral: Tremor.  
Gastrointestinal: hypermotility, diarrhea.

12. Ecological Information

No Data Available...

13. Disposal Considerations

Place in sealed container. Consult Federal EPA, State and local regulations for proper disposal/recycle/reclamation  
NOTE: Chemical additions, processing, or otherwise altering this material may make the waste management information presented above incomplete, inaccurate, or otherwise inappropriate.

**RCRA Information**  
NL
14. Transport Information

**Proper Shipping Name**
- Chloroplatinic acid, solid

**Hazard Class**
- 8

**DOT Identification Number**
- 2507

**DOT Shipping Label**
- Corrosive

**Packaging Requirements**
- PG III

**Additional Shipping Paper Description**
- IATA: Same as DOT. Always consult IATA manual before shipping.

**TDG - Canada (Pictograms)**

![Pictogram]

15. Regulatory Information

**U.S. Regulatory Information**
- TSCA: This chemical is TSCA listed.

**Canadian Regulatory Information**
- This product has been classified in accordance with the hazard criteria of CPR, and the MSDS contains all the information required by the CPR.
  - DSL: Yes
  - NDSL: No

**European Union (EU) Regulatory Information**
- Symbol of Danger: T
- Indication of Danger: Toxic
- Risk#: 25-34-42/43
- Risk Phrase: Toxic if swallowed. Cause burns. May cause sensitization by inhalation and skin contact.
- Safety #: 36/37/39-26-45-22
- Safety Phrase: Wear suitable protective clothing, gloves, and eye/face protection. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show label where possible). Do not breathe dust.

**Other International Regulations**

**WHMIS - Canada (Pictograms)**

![Pictogram]
16. Other Information

NFPA Rating
- Health: 3
- Fire: 0
- Reactivity: 1
- Other: COR

HMIS Rating
- Health: 3
- Fire: 0
- Reactivity: 1
- Personal Protection: J

Revision/Preparer Information
MSDS Preparer: DF Goldsmith Chemical and Metal
MSDS Preparer Phone Number: 847-869-7800
This MSDS Supersedes A Previous MSDS Dated: 08/28/2001

Disclaimer

In compliance with the OSHA Hazard Communication Standard, 29 C.F.R 1910.1200, we are providing you with a Materials Safety Data Sheet (MSDS) for the hazardous material you are purchasing.

It is your responsibility to educate your employees on the safe use of the hazardous material. With this in mind, a copy should be forwarded to the supervisor of the user or to the user themselves, and copy should be retained in your files for future reference.

DF Goldsmith Chemical and Metal makes no presentation as to the accuracy of the information in the MSDS. The information is believed to be correct; however, you (the customer), should perform your own investigation and independent verification. If you resell the product, you are responsible to forward the information in the MSDS to your customer.