

Platinum Black Plating Solution

Material Safety Data Sheet

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Revision History

10/19/11 Rev 1.0 Original creation of document

1 Identification

- a) Platinum Black Plating Solution
- b) Poison Control Hotline US: 800 222 1222
- c) Supplier: Neuralynx Inc. 105 Commerical Dr, Bozeman, MT 59715
- d) Manufacturer: Neuralynx Inc. 105 Commerical Dr, Bozeman, MT 59715
- e) Product is used for platinum black plating, typically on neurological platinum iridium electrodes.
- f) MSDS prepared 2011 September 7
- g) MSDS written by Neuralynx, 001 (406)585-4542

2 Composition/Information on Ingredients

Ingredient	Chemical Formula	Concentration	CAS	Ref MSDS
Chloroplatinic Acid Hydrate,	$H_2Cl_6Pt \cdot H_2O$	1% (w/v)	26023-84-7	[1]
Distilled Water		99%		

Table 1: Ingredients

- a. General
 - a. WHMIS – no compounds on WHMIS greater or equal to 0.1%
 - b. No component of this product present at levels greater than 0.1% is identified as probable, possible or confirmed carcinogen by IARC, ACGIH, NTP, or OSHA.
 - c. No component of this product present greater than 1% is identified as a hazardous material.
- b. Unknown toxicity
 - a. Chloroplatinic acid
- c. No ingredient is believed harmful when exposure controls are followed; see section 8, Exposure Controls.
- d. Trade secrets – not applicable
- e. Ingredient names and concentrations see Table 1: Ingredients
- f. Exposure limits
 - a. Chloroplatinic acid – No known exposure Limit

3 Hazards Identification

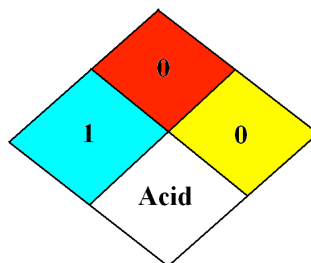
Potential Acute Health Effects:

Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, . Hazardous in case of skin contact (corrosive, sensitizer), of eye contact (corrosive), of inhalation (lung sensitizer). Slightly hazardous in case of skin contact (permeator). The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

Slightly hazardous in case of skin contact (sensitizer). CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to lungs, mucous membranes, skin, eyes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Pictogram



P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.

Skin May be harmful if absorbed through skin. Causes skin burns. Eyes Causes eye burns. Ingestion Toxic if swallowed.

4 First Aid Measures

- a. General advice
Move out of dangerous area.
Obtain medical attention if discomfort persists after first aid.

- If medical attention is necessary provide medical personal with MSDS
- b. If inhaled - If breathed in, move person into fresh air. If not breathing, give artificial respiration.
 - c. In case of skin contact - Wash off with soap and plenty of water. Remove contaminated clothing
 - d. In case of eye contact - If present and possible, remove contact lenses. Flush eyes with water as a precaution. Continue rinsing eyes during transport to hospital
 - e. If swallowed - Never give anything by mouth to an unconscious person. Rinse mouth with water. Do not induce vomiting. Get medical attention.

5 Fire Fight Measures

Not applicable.

6 Accidental Release Measures

- a. Personal precautions
Avoid breathing vapors, mist or gas.
- b. Wear protective clothing as described in Section 8: Exposure Controls/Personal Protection
- c. Clean with disposable towel.
- d. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

7 Handling and Storage

- a. Precautions for safe handling
Do not ingest. If ingested, seek medical advice immediately and show medical personal this MSDS. Avoid contact with hands and eyes. In case of inadequate ventilation, wear suitable respiratory equipment.
- b. Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8 Exposure Controls/Personal Protection

- a. Respiratory protection is not needed for normal use.
- b. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
- c. Eye protection - Use Safety glasses or goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- d. Skin and body protection - Impervious clothing,
- e. Hygiene measures -General industrial hygiene practice.

9 Physical and Chemical Properties

- a. Appearance - Form clear, liquid
- b. Colour dark yellow
- c. Safety data - pH 1.25
- d. Melting – not applicable
Freezing point - no data available
- e. Boiling point no data available
- f. Flash point not applicable
- g. Ignition temperature not applicable
- h. Autoignition temperature – not applicable
- i. Lower explosion limit - not applicable
Upper explosion limit - not applicable
- j. Vapour pressure no data available
- k. Density 1.02 g/mL at 25 °C (77 °F)
- l. Water solubility - not applicable
- m. Partition coefficient - no data available
- n. Relative vapor density no data available
- o. Odor no data available
- p. Odor Threshold no data available
- q. Evaporation rate no data available

10 Stability and Reactivity

- a. Chemical stability Stable under recommended storage conditions.
- b. Possibility of hazardous reactions no data available
- c. Materials to avoid bases, strong acids
- d. Other decomposition products - no data available
- e. Reactivity – Incompatible with cyanides and sulfides, reactive with metals, alkalis.
- f. Polymerization – Will not occur.

11 Toxicological Information

- a. Acute toxicity
- b. Oral LD50 no data available
- c. Inhalation LC50 No data available
- d. Dermal LD50 no data available
- e. Other information on acute toxicity no data available
- f. Germ cell mutagenicity no data available
- g. Ingestion – Harmful if swallowed.
- h. No component of this product present at levels greater than 0.1% is identified as probable, possible or confirmed carcinogen by IARC, ACGIH, NTP, or OSHA.
- i. Potential health effects

- a. Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
- b. Ingestion Toxic if swallowed.
- c. Skin May be harmful if absorbed through skin. May causes skin burns.
- d. Eyes Causes eye burns.
- j. Signs and Symptoms of Exposure
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea
- k. Synergistic effects no data available
- l. Additional Information RTECS: Not available

12 Ecological Information

- a. No data available

13 Disposal Considerations

Dispose of waste and residues in accordance with local authority requirements.

14 Transport Information

No component of this product present greater than 1% is identified as a hazardous material.

DOT (US) UN number: 3264

Class: 8 Packing group: III

Proper shipping name:

Corrosive liquid, acidic, inorganic, n.o.s. (Hexachloroplatinic acid)

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 3264 Class: 8 Packing group: III EMS-No: F-A, S-B

Proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(Hexachloroplatinic acid)

Marine pollutant: No

IATA

UN number: 3264 Class: 8 Packing group: III

Proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (Hexachloroplatinic acid)

15 Regulatory Information

OSHA Hazards

Toxic by ingestion, Respiratory sensitiser, Corrosive

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold

(De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Right To Know Components: Hexachloroplatinic acid 16941-12-1 2007-03-01

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16 Reference

- [1] "MSDS:: Chloroplatinic Acid aqueous." [Online]. Available: <http://www.sigmaaldrich.com/catalog/DisplayMSDSContent.do>. [Accessed: 07-Sep-2011].