

# Material Safety Data Sheet

## Platinum Cobalt Color Standard Solution

ACC# 40138

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Platinum Cobalt Color Standard Solution

**Catalog Numbers:** SP120-1, SP120-500

**Synonyms:** None

**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
7732-18-5	Water	95	231-791-2
7647-01-0	Hydrogen chloride	4.6	231-595-7
16921-30-5	Potassium platinic chloride	0.13	240-979-3
7791-13-1	Platinum Cobalt Color Standard Solution	0.1	unlisted

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: yellow liquid.

**Danger!** Causes eye and skin burns. Causes digestive and respiratory tract burns. May cause allergic respiratory and skin reaction. May cause cancer based on animal studies.

**Target Organs:** Lungs, respiratory system, red blood cells.

**Potential Health Effects**

**Eye:** May cause irreversible eye injury. Vapor or mist may cause irritation and severe burns. Contact with liquid is corrosive to the eyes and causes severe burns.

**Skin:** May be absorbed through the skin in harmful amounts. Prolonged and/or repeated contact may cause irritation and/or dermatitis. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Contact with liquid is corrosive and causes severe burns and ulceration.

**Ingestion:** May cause circulatory system failure. Causes severe digestive tract burns with abdominal pain, vomiting, and possible death. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract.

**Inhalation:** Causes delayed lung injury. May cause cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood). May cause asthmatic attacks due to allergic sensitization of the respiratory tract. May cause pulmonary edema and severe respiratory disturbances.

**Chronic:** Prolonged or repeated skin contact may cause dermatitis. Repeated exposure may cause erosion of teeth. May depress red blood cell production.

### Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed.

**Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Discard contaminated clothing in a manner which limits further exposure. Destroy contaminated shoes.

**Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

**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. Use water spray to keep fire-exposed containers cool.

**Extinguishing Media:** Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 0; Instability: 0

## Section 6 - Accidental Release Measures

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

**Spills/Leaks:** Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Discard contaminated shoes.

**Storage:** Keep away from heat and flame. Do not store in direct sunlight. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** 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
Water	none listed	none listed	none listed
Hydrogen chloride	2 ppm Ceiling	50 ppm IDLH	5 ppm Ceiling; 7 mg/m <sup>3</sup> Ceiling
Potassium platinic chloride	0.002 mg/m <sup>3</sup> TWA (as Pt) (listed under Platinum soluble salts).	0.002 mg/m <sup>3</sup> TWA (as Pt) (listed under Platinum soluble salts).4 mg/m <sup>3</sup> IDLH (as Pt) (listed under Platinum soluble salts).	0.002 mg/m <sup>3</sup> TWA (as Pt) (listed under Platinum soluble salts).
Platinum Cobalt Color Standard Solution	0.02 mg/m <sup>3</sup> TWA (as Co) (listed under Cobalt, inorganic compounds).	none listed	none listed

**OSHA Vacated PELs:** Water: No OSHA Vacated PELs are listed for this chemical. Hydrogen chloride: No OSHA Vacated PELs are listed for this chemical. Potassium platinic chloride: No OSHA Vacated PELs are listed for this chemical. Platinum Cobalt Color Standard Solution: 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 protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

## Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** yellow

**Odor:** none reported

**pH:** approximately 1.1

**Vapor Pressure:** 14 mm Hg

**Vapor Density:** 0.7

**Evaporation Rate:**>1

**Viscosity:** Not available.

**Boiling Point:** 100 deg C

**Freezing/Melting Point:**0 deg C

**Decomposition Temperature:**250 deg C

**Solubility:** Soluble in water.

**Specific Gravity/Density:**1.0

**Molecular Formula:**Mixture

**Molecular Weight:**Not available.

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials.

**Incompatibilities with Other Materials:** Acetate, acetic anhydride, alcohols and hydrogen cyanide, 2-aminoethanol, ammonium hydroxide, calcium carbide, calcium phosphide, cesium acetylene carbide, cesium carbide, chlorosulfonic acid, 1,1-difluororethylene, ethylene diamine, ethylenimine, fluorine, lithium silicide, magnesium boride, mercuric sulfate, premylene oxide, rubidium acetylene carbide, rubidium carbide, silver perchlorate and carbontetrachloride, sodium, sodium hydroxide, sulfuric acid, uranium phosphide.

**Hazardous Decomposition Products:** Hydrogen chloride, hydrogen gas.

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 7732-18-5: ZC0110000  
**CAS#** 7647-01-0: MW4025000; MW4031000

**CAS#** 16921-30-5: TP1650000  
**CAS#** 7791-13-1: GG0200000

**LD50/LC50:**

**CAS#** 7732-18-5:  
Oral, rat: LD50 = >90 mL/kg;

**CAS#** 7647-01-0:

Inhalation, mouse: LC50 = 1108 ppm/1H;  
Inhalation, mouse: LC50 = 20487 mg/m<sup>3</sup>/5M;  
Inhalation, mouse: LC50 = 3940 mg/m<sup>3</sup>/30M;  
Inhalation, mouse: LC50 = 8300 mg/m<sup>3</sup>/30M;  
Inhalation, rat: LC50 = 3124 ppm/1H;  
Inhalation, rat: LC50 = 60938 mg/m<sup>3</sup>/5M;  
Inhalation, rat: LC50 = 7004 mg/m<sup>3</sup>/30M;  
Inhalation, rat: LC50 = 45000 mg/m<sup>3</sup>/5M;  
Inhalation, rat: LC50 = 8300 mg/m<sup>3</sup>/30M;  
Oral, rabbit: LD50 = 900 mg/kg;

**CAS#** 16921-30-5:

**CAS#** 7791-13-1:

Oral, rat: LD50 = 766 mg/kg;  
Skin, rat: LD50 = >2 gm/kg;

**Carcinogenicity:**

**CAS#** 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**CAS#** 7647-01-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**CAS#** 16921-30-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**CAS#** 7791-13-1:

- **ACGIH:** A3 - Confirmed animal carcinogen with unknown relevance to humans (listed as 'Cobalt, inorganic compounds').
- **California:** Not listed.
- **NTP:** Not listed.
- **IARC:** Group 2B carcinogen (listed as Soluble cobalt (II) salts).

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Mutagenicity:** Has caused mutation in mammalian somatic cells at concentrations of 10mol/l.

**Neurotoxicity:** No information 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

	<b>US DOT</b>	<b>Canada TDG</b>
<b>Shipping Name:</b>	HYDROCHLORIC ACID	No information available.
<b>Hazard Class:</b>	8	
<b>UN Number:</b>	UN1789	
<b>Packing Group:</b>	II	

## Section 15 - Regulatory Information

## US FEDERAL

### TSCA

CAS# 7732-18-5 is listed on the TSCA inventory.  
CAS# 7647-01-0 is listed on the TSCA inventory.  
CAS# 16921-30-5 is listed on the TSCA inventory.  
CAS# 7791-13-1 is not listed on the TSCA inventory. It is for research and development use only.

### 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

CAS# 7647-01-0: 5000 lb final RQ; 2270 kg final RQ

### SARA Section 302 Extremely Hazardous Substances

CAS# 7647-01-0: 500 lb TPQ

### SARA Codes

CAS # 7647-01-0: immediate.  
CAS # 16921-30-5: immediate.  
CAS # 7791-13-1: immediate, delayed.

### Section 313

This material contains Hydrogen chloride (CAS# 7647-01-0, 4.6%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

This material contains Platinum Cobalt Color Standard Solution (listed as Cobalt compounds), 0.1%, (CAS# 7791-13-1) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

### Clean Air Act:

CAS# 7647-01-0 is listed as a hazardous air pollutant (HAP).

CAS# 7791-13-1 (listed as Cobalt compounds) is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

### Clean Water Act:

CAS# 7647-01-0 is listed as a Hazardous Substance 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:

CAS# 7647-01-0 is considered highly hazardous by OSHA.

### STATE

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 7647-01-0 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 16921-30-5 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# 7791-13-1 can be found on the following state right to know lists: Pennsylvania, (listed as Cobalt compounds), Minnesota, (listed as Cobalt, inorganic compounds).

### 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:

C

##### Risk Phrases:

R 22 Harmful if swallowed.  
R 35 Causes severe burns.  
R 42/43 May cause sensitization by inhalation and skin contact.

##### Safety Phrases:

S 22 Do not breathe dust.  
S 23 Do not inhale gas/fumes/vapour/spray.  
S 24/25 Avoid contact with skin and eyes.  
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

### WGK (Water Danger/Protection)

CAS# 7732-18-5: No information available.  
CAS# 7647-01-0: 1  
CAS# 16921-30-5: 2  
CAS# 7791-13-1: 2

### Canada - DSL/NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.  
CAS# 7647-01-0 is listed on Canada's DSL List.  
CAS# 16921-30-5 is listed on Canada's DSL List.

### Canada - WHMIS

This product has a WHMIS classification of E.

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# 7647-01-0 is listed on the Canadian Ingredient Disclosure List.

CAS# 16921-30-5 is listed on the Canadian Ingredient Disclosure List.  
CAS# 7791-13-1 is not listed on the Canadian Ingredient Disclosure List.

## Section 16 - Additional Information

**MSDS Creation Date:** 10/22/1998

**Revision #4 Date:** 10/03/2005

*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.*