



Be Right™

SAFETY DATA SHEET

Issue Date 17-04-2020

Revision Date 26-Jan-2024

Version 2.5

Page 1 / 17

1. IDENTIFICATION

Product identifier

Product Name Color Standard Solution 500 Platinum Cobalt Units

Other means of identification

Product Code(s) 141453

Safety data sheet number M00660

UN/ID no UN1789

Recommended use of the chemical and restrictions on use

Recommended Use Standard solution. Water Analysis.

Uses advised against None.

Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address

Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

Emergency telephone number

+1(303) 623-5716 - 24 Hour Service

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status

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

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Respiratory sensitization	Category 1A
Skin sensitization	Category 1
Carcinogenicity	Category 1B
Reproductive toxicity	Category 1B

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word

Danger

Product Code(s) 141453

Product Name Color Standard Solution 500 Platinum Cobalt
Units

Issue Date 17-04-2020

Revision Date 26-Jan-2024

Version 2.5

Page 2 / 17



Hazard statements

H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

H317 - May cause an allergic skin reaction

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H350 - May cause cancer

H360 - May damage fertility or the unborn child

Precautionary statements

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P280 - Wear protective gloves, protective clothing, eye protection, and face protection

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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

P285 - In case of inadequate ventilation wear respiratory protection

P304 + P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P272 - Contaminated work clothing should not be allowed out of the workplace

P363 - Wash contaminated clothing before reuse

P201 - Obtain special instructions before use

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

P234 - Keep only in original container

P390 - Absorb spillage to prevent material damage

Other Hazards Known

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent	HMRIC #
---------------	--------	---------	---------

Product Code(s) 141453

Product Name Color Standard Solution 500 Platinum Cobalt Units

Issue Date 17-04-2020

Revision Date 26-Jan-2024

Version 2.5

Page 3 / 17

		Range	
Hydrochloric acid	7647-01-0	1 - 5%	-
Potassium hexachloroplatinate(IV)	16921-30-5	<1%	-
Cobalt chloride (CoCl ₂)	7646-79-9	<1%	-

4. FIRST AID MEASURES

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. 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. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention. May cause allergic respiratory reaction. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical advice/attention.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention. May cause an allergic skin reaction.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical advice/attention. May produce an allergic reaction.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

Symptoms	Burning sensation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Coughing and/ or wheezing. Itching. Rashes. Hives.
-----------------	--

Indication of any immediate medical attention and special treatment needed

Note to physicians	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization in susceptible persons. Treat symptomatically.
---------------------------	---

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media	Caution: Use of water spray when fighting fire may be inefficient.
Specific hazards arising from the chemical	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact. May cause sensitization by skin contact.

Product Code(s) 141453

Product Name Color Standard Solution 500 Platinum Cobalt Units

Issue Date 17-04-2020

Revision Date 26-Jan-2024

Version 2.5

Page 4 / 17

Hazardous combustion products This material will not burn.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

U.S. Notice Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

Reference to other sections See section 8 for more information. See section 13 for more information.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Provide extract ventilation to points where emissions occur. Remove contaminated clothing and shoes.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

Flammability class Not applicable

Product Code(s) 141453

Product Name Color Standard Solution 500 Platinum Cobalt Units

Issue Date 17-04-2020

Revision Date 26-Jan-2024

Version 2.5

Page 5 / 17

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Hydrochloric acid CAS#: 7647-01-0	Ceiling: 2 ppm	(vacated) Ceiling: 5 ppm (vacated) Ceiling: 7 mg/m ³ Ceiling: 5 ppm Ceiling: 7 mg/m ³	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m ³
Potassium hexachloroplatinate(IV) CAS#: 16921-30-5	TWA: 0.002 mg/m ³ Pt	TWA: 0.002 mg/m ³ (vacated) TWA: 0.002 mg/m ³	IDLH: 4 mg/m ³ Pt TWA: 0.002 mg/m ³ Pt
Cobalt chloride (CoCl ₂) CAS#: 7646-79-9	dermal sensitizer;respiratory sensitizer TWA: 0.02 mg/m ³ Co inhalable particulate matter	NDF	NDF

Appropriate engineering controls

Engineering Controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hand Protection

Wear suitable gloves. Impervious gloves. Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.

Eye/face protection

Face protection shield.

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

General Hygiene Considerations

Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

Thermal hazards

None under normal processing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state

Liquid

Appearance

aqueous solution

Color

yellow

Odor

Odorless

Odor threshold

No data available

Product Code(s) 141453

Product Name Color Standard Solution 500 Platinum Cobalt
Units

Issue Date 17-04-2020

Revision Date 26-Jan-2024

Version 2.5

Page 6 / 17

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Molecular weight	No data available	
pH	~ 1	@ 20 °C
Melting point / freezing point	~ -6 °C / 21.2 °F	
Initial boiling point and boiling range	~ 102 °C / 215.6 °F	
Evaporation rate	0.96 (water = 1)	
Vapor pressure	17.102 mm Hg / 2.28 kPa at 20 °C / 68 °F	
Relative vapor density	0.64	
Specific gravity - VALUE 1	1.02	
Partition coefficient	Not applicable	
Soil Organic Carbon-Water Partition Coefficient	Not applicable	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	~ 1.1 cP (mPa s) at 20 °C / 68 °F	
Kinematic viscosity	~ 1.078 cSt (mm ² /s) at 20 °C / 68 °F	

Solubility(ies)

Water solubility

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
Soluble	> 1000 mg/L	25 °C / 77 °F

Solubility in other solvents

<u>Chemical Name</u>	<u>Solubility classification</u>	<u>Solubility</u>	<u>Solubility Temperature</u>
Acid	Soluble	> 1000 mg/L	25 °C / 77 °F

Other information

Metal Corrosivity

Classified as corrosive to metal according to GHS criteria

Steel Corrosion Rate

4759.96 mm/yr / 187.4 in/yr

Aluminum Corrosion Rate

20660.4 mm/yr / 813.4 in/yr

Volatile Organic Compounds (VOC) Content

<u>Chemical name</u>	<u>CAS No</u>	<u>Volatile organic compounds (VOC) content</u>	<u>CAA (Clean Air Act)</u>
Hydrochloric acid	7647-01-0	Not applicable	-
Potassium hexachloroplatinate(IV)	16921-30-5	No data available	-
Cobalt chloride (CoCl ₂)	7646-79-9	No data available	-

Explosive properties

Product Code(s) 141453

Issue Date 17-04-2020

Version 2.5

Product Name Color Standard Solution 500 Platinum Cobalt Units

Revision Date 26-Jan-2024

Page 7 / 17

Upper explosion limit
Lower explosion limit

No data available
No data available

Flammable properties

Flash point

No data available

Flammability Limit in Air

Upper flammability limit:
Lower flammability limit:

No data available
No data available

Oxidizing properties

No data available.

Bulk density

No data available

10. STABILITY AND REACTIVITY

Reactivity

Corrosive on contact with water. Corrosive to metal.

Chemical stability

Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Possibility of hazardous reactions

None under normal processing.

Hazardous polymerization

None under normal processing.

Conditions to avoid

Exposure to air or moisture over prolonged periods.

Incompatible materials

Oxidizing agent. Acids. Bases.

Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation

Corrosive by inhalation. Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause sensitization in susceptible persons.

Eye contact

Causes burns. Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May cause sensitization by skin contact. Corrosive. Causes severe burns. Avoid contact with skin and clothing.

Ingestion

Causes burns. Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. May cause additional affects as listed under "Inhalation".

Symptoms

Redness. Burning. May cause blindness. Coughing and/ or wheezing. 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. Itching. Rashes. Hives.

Acute toxicity

Based on available data, the classification criteria are not met

Mixture

No data available.

Ingredient Acute Toxicity Data

No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Potassium hexachloroplatinate(V) (<1%) CAS#: 16921-30-5	Rat LD ₅₀	195 mg/kg	None reported	None reported	Vendor SDS
Cobalt chloride (CoCl ₂) (<1%) CAS#: 7646-79-9	Rat LD ₅₀	80 mg/kg	None reported	None reported	GESTIS
Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Cobalt chloride (CoCl ₂) (<1%) CAS#: 7646-79-9	Rat LD ₅₀	> 2000 mg/kg	None reported	None reported	GESTIS

Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity.

Acute Toxicity Estimations (ATE)

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	No information available mg/kg
ATEmix (dermal)	No information available
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available
ATEmix (inhalation-gas)	No information available

Skin corrosion/irritation

Causes severe burns.

Mixture

No data available.

Product Code(s) 141453

Product Name Color Standard Solution 500 Platinum Cobalt Units

Issue Date 17-04-2020

Revision Date 26-Jan-2024

Version 2.5

Page 9 / 17

Ingredient Skin Corrosion/Irritation Data

No data available.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Hydrochloric acid (1 - 5%) CAS#: 7647-01-0	Existing human experience	Human	None reported	None reported	Corrosive to skin	RTECS

Serious eye damage/irritation

Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.

Mixture

No data available.

Ingredient Eye Damage/Eye Irritation Data

No data available.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Hydrochloric acid (1 - 5%) CAS#: 7647-01-0	Existing human experience	Human	None reported	None reported	Corrosive to eyes	RTECS
Cobalt chloride (CoCl ₂) (<1%) CAS#: 7646-79-9	Standard Draize Test	Rabbit	100 mg	None reported	Corrosive to eyes	ECHA

Respiratory or skin sensitization

May cause sensitization by inhalation. May cause sensitization by skin contact.

Mixture

No data available.

Ingredient Sensitization Data

No data available.

Chemical name	Test method	Species	Results	Key literature references and sources for data
Cobalt chloride (CoCl ₂) (<1%) CAS#: 7646-79-9	Patch test	Human	Confirmed to be a skin sensitizer	Vendor SDS
Chemical name	Test method	Species	Results	Key literature references and sources for data
Potassium hexachloroplatinate(V) (<1%) CAS#: 16921-30-5	None reported	None reported	Confirmed to be a respiratory sensitizer	No information available

STOT - single exposure

Based on available data, the classification criteria are not met.

Mixture

No data available.

Ingredient Specific Target Organ Toxicity Single Exposure Data

No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Hydrochloric acid (1 - 5%) CAS#: 7647-01-0	Man LD _{Lo}	2.857 mg/kg	None reported	Vascular BP lowering not characterized in autonomic section Lungs, Thorax, or Respiration Respiratory depression Gastrointestinal Other changes	RTECS
Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Hydrochloric acid (1 - 5%) CAS#: 7647-01-0	Human TC _{Lo}	0.05 mg/L	None reported	Lungs, Thorax, or Respiration Cough	RTECS

STOT - repeated exposure

Based on available data, the classification criteria are not met.

Mixture

No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data

No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Hydrochloric acid (1 - 5%) CAS#: 7647-01-0	Rat TC _{Lo}	0.000685 mg/L	84 days	Behavioral Muscle contraction or spasticity Biochemical Enzyme inhibition, induction, or change in blood or tissue levels (true cholinesterase) Kidney, Ureter, or Bladder Other changes in urine composition	RTECS

Carcinogenicity

Classification based on data available for ingredients. Contains a known or suspected carcinogen.

Mixture

No data available.

Ingredient Carcinogenicity Data

No data available.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
Hydrochloric acid	7647-01-0	-	Group 3	-	X
Potassium hexachloroplatinate(IV)	16921-30-5	-	-	-	-
Cobalt chloride (CoCl ₂)	7646-79-9	A3	Group 2B	Reasonably Anticipated	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)	Group 3 - Not classifiable as a human carcinogen Group 2B - Possibly Carcinogenic to Humans
NTP (National Toxicology Program)	Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA	X - Present
------	-------------

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Mixture invitro Data

No data available.

Substance invitro Data

No data available.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
Hydrochloric acid (1 - 5%) CAS#: 7647-01-0	Cytogenetic analysis	Hamster lung	30 mmol/L	None reported	Positive test result for mutagenicity	RTECS
Potassium hexachloroplatinate(IV) (<1%) CAS#: 16921-30-5	Mutation in mammalian somatic cells	Hamster ovary	0.01 mmol/L	None reported	Positive test result for mutagenicity	Vendor SDS
Cobalt chloride (CoCl ₂) (<1%) CAS#: 7646-79-9	DNA damage	Human lymphocyte	4.5 mg/L	None reported	Positive test result for mutagenicity	RTECS

Mixture invivo Data

No data available.

Substance invivo Data

No data available.

Reproductive toxicity

Classification based on data available for ingredients. Contains a known or suspected reproductive toxin. The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

Mixture

No data available.

Ingredient Reproductive Toxicity Data

No data available.

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Cobalt chloride (CoCl ₂) (<1%) CAS#: 7646-79-9	Mouse TD _{Lo}	7280 mg/kg	None reported	Effects on Fertility Paternal Effects Epididymis Male fertility index (e.g. # males impregnating females per # males exposed to fertile nonpregnant females) Sperm duct Spermatogenesis (including genetic material, sperm morphology, motility, and count) testes	Vendor SDS
Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Hydrochloric acid (1 - 5%)	Rat TC _{Lo}	0.450 mg/L	1 hours	Effects on Embryo or Fetus Fetotoxicity (except death e.g.	RTECS

CAS#: 7647-01-0				stunted fetus) Specific Developmental Abnormalities Homeostasis	
-----------------	--	--	--	---	--

Aspiration hazard

Based on available data, the classification criteria are not met.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Based on available data, the classification criteria are not met.

Unknown aquatic toxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Mixture

Aquatic Acute Toxicity

No data available.

Aquatic Chronic Toxicity

No data available.

Substance

Aquatic Acute Toxicity

No data available.

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Cobalt chloride (CoCl ₂) (<1%) CAS#: 7646-79-9	96 hours	<i>Cyprinus carpio</i>	LC ₅₀	0.33 mg/L	GESTIS
Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Cobalt chloride (CoCl ₂) (<1%) CAS#: 7646-79-9	48 Hours	<i>Daphnia magna</i>	EC ₅₀	>= 1.1 mg/L	GESTIS
Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Cobalt chloride (CoCl ₂) (<1%) CAS#: 7646-79-9	96 hours	<i>Chlorella vulgaris</i>	EC ₅₀	0.5 mg/L	GESTIS

Aquatic Chronic Toxicity

No data available.

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Cobalt chloride (CoCl ₂) (<1%) CAS#: 7646-79-9	34 days	<i>Pimephales promelas</i>	NOAEL	0.21 mg/L	ECHA

Persistence and degradability

Mixture

No data available.

Mixture

Product Code(s) 141453

Product Name Color Standard Solution 500 Platinum Cobalt Units

Issue Date 17-04-2020

Revision Date 26-Jan-2024

Version 2.5

Page 13 / 17

No data available.

Partition coefficient Not applicable

Mobility

Soil Organic Carbon-Water Partition Coefficient Not applicable

Other adverse effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number D002

Special instructions for disposal Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. If permitted by regulation. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system. Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.

14. TRANSPORT INFORMATION

DOT

UN/ID no UN1789
Proper shipping name Hydrochloric Acid Solution
Transport hazard class(es) 8
Packing Group II
Emergency Response Guide Number 157

TDG

UN/ID no UN1789
Proper shipping name Hydrochloric Acid Solution
Transport hazard class(es) 8
Packing Group II

IATA

UN number or ID number UN1789
Proper shipping name Hydrochloric Acid Solution
Transport hazard class(es) 8
Packing group II
ERG Code 157

IMDG

UN number or ID number UN1789
Proper shipping name Hydrochloric Acid Solution
Transport hazard class(es) 8
Packing Group II

Product Code(s) 141453

Product Name Color Standard Solution 500 Platinum Cobalt Units

Issue Date 17-04-2020

Revision Date 26-Jan-2024

Version 2.5

Page 14 / 17

Note: No special precautions necessary.

Additional information

There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies.

If the item is part of a reagent set or kit the classification would change to the following:

UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.

If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

National Inventories

TSCA Complies

DSL/NDSL Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

International Inventories

EINECS/ELINCS Complies

ENCS Complies

IECSC Complies

KECL Complies

PICCS Complies

TCSI Complies

AICS Complies

NZIoC Complies

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TCSI - Taiwan Chemical Substances Inventory

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Table with 2 columns: Chemical name, SARA 313 - Threshold Values %. Rows include Hydrochloric acid (CAS #: 7647-01-0) and Cobalt chloride (CoCl2) (CAS #: 7646-79-9).

SARA 311/312 Hazard Categories

Table with 2 columns: Hazard Category, Yes/No. Rows include Acute health hazard, Chronic Health Hazard, Fire hazard, Sudden release of pressure hazard, and Reactive Hazard.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Table with 5 columns: Chemical name, CWA - Reportable Quantities, CWA - Toxic Pollutants, CWA - Priority Pollutants, CWA - Hazardous Substances.

Product Code(s) 141453

Product Name Color Standard Solution 500 Platinum Cobalt Units

Issue Date 17-04-2020

Revision Date 26-Jan-2024

Version 2.5

Page 15 / 17

Hydrochloric acid 7647-01-0	5000 lb	-	-	X
--------------------------------	---------	---	---	---

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Hydrochloric acid 7647-01-0	5000 lb	5000 lb	RQ 5000 lb final RQ RQ 2270 kg final RQ

U.S. - Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS) - Security Issues

Chemical name	U.S. - Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS) - Security Issues
Hydrochloric acid (1 - 5%) CAS#: 7647-01-0	Release - Toxic (concentration >=37%); Release - Toxic (anhydrous); Theft - Weapons of Mass Effect (anhydrous)

U.S. - DEA (Drug Enforcement Administration) List I & List II

Chemical name	U.S. - DEA (Drug Enforcement Administration) - List I or Precursor Chemicals	U.S. - DEA (Drug Enforcement Administration) - List II or Essential Chemicals
Hydrochloric acid (1 - 5%) CAS#: 7647-01-0	Not Listed	0.0 kg Domestic Sales Weight (listed under anhydrous Hydrogen chloride); 50 gallon Export Volume (exports, transshipments and international transactions to designated countries given in 1310.08(b)); 27 kg Export Weight (exports, transshipments and international transactions to designated countries given in 1310.08(b), listed under anhydrous Hydrogen chloride)

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

This product may contain substances regulated by state right-to-know regulations.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Hydrochloric acid 7647-01-0	X	X	X
Potassium hexachloroplatinate(IV) 16921-30-5	-	-	X
Cobalt chloride (CoCl2) 7646-79-9	X	-	X

U.S. EPA Label Information

Chemical name	FIFRA	FDA
Hydrochloric acid	180.0910	21 CFR 182.1057

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**Special Comments**

None

Additional information**Global Automotive Declarable Substance List (GADSL)**

Chemical name	Global Automotive Declarable Substance List Classifications	Global Automotive Declarable Substance List Thersholds
Cobalt chloride (CoCl ₂) 7646-79-9	Declarable Substance (LR) Prohibited Substance (FA) Prohibited Substance (FI) Prohibited Substance (LR) Declarable Substance (FA) Declarable Substance (FI)	0.1 %

NFPA and HMIS Classifications

NFPA	Health hazards - 3	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 3 - *	Flammability - 0	Physical hazards - 0	Personal protection - X - I

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	EPA (Environmental Protection Agency)
ERMA	ERMA (New Zealand's Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)
IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)

Product Code(s) 141453

Product Name Color Standard Solution 500 Platinum Cobalt
Units

Issue Date 17-04-2020

Revision Date 26-Jan-2024

Version 2.5

Page 17 / 17

USDA
USDC
WHO

USDA (United States Department of Agriculture)
USDC (United States Department of Commerce)
WHO (World Health Organization)

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

Prepared By Hach Product Compliance Department

Issue Date 17-04-2020

Revision Date 26-Jan-2024

Revision Note None

Disclaimer

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

HACH COMPANY©2023

End of Safety Data Sheet