Color Standard Solution

SECTION 1: Identification

Product identifier

Product name: Color Standard Solution
Product code: CO9000

Recommended use of the product and restriction on use

Relevant identified uses: Laboratory Chemicals
Uses advised against: Not determined or not applicable.
Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:
United States
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331
1-717-632-1291

Emergency telephone number:

United States
ChemTel Inc
+1(800)255-3924
+1(813)248-0585

SECTION 2: Hazard(s) identification

GHS classification:

Skin corrosion, category 1B
Corrosive to metals, category 1

Label elements

Hazard pictograms:

Signal word: Danger

Hazard statements:

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

Precautionary statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P234 Keep only in original container.
P301 IF SWALLOWED:
P303 IF ON SKIN (or hair):
P304 IF INHALED:
P305 IF IN EYES:
P310 Immediately call a POISON CENTER or doctor/physician.

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P321 Specific treatment (see ... on this label).
P330 Rinse mouth
P331 Do NOT induce vomiting.
P338 Remove contact lenses if present and easy to do. Continue rinsing
P340 Remove victim to fresh air and keep at rest in a position comfortable for breathing
P351 Rinse cautiously with water for several minutes
P353 Rinse skin with water/shower
P361 Remove/Take off immediately all contaminated clothing.
P363 Wash contaminated clothing before reuse
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.
P390 Absorb spillage to prevent material damage
P405 Store locked up.
P406 Store in corrosive resistant container with a resistant inner liner.
P501 Dispose of contents/container to ...

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 7732-18-5	Demineralized Water	>90
CAS number: 7647-01-0	Hydrochloric acid	1-10
CAS number: 7646-79-9	Cobalt Chloride	0.1
CAS number: 16921-30-5	Potassium Hexachloroplatinate (IV)	0.2

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position
Maintain an unobstructed airway
Get medical advice/attention if you feel unwell
Move exposed individual to fresh air
Immediately call a POISON CONTROL CENTER or seek medical attention

After skin contact:

Rinse affected area with soap and water
If symptoms develop or persist, seek medical attention
Immediately remove all contaminated clothing

Wash affected area with soap and water
Immediately call a POISON CONTROL CENTER or seek medical attention

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes
Remove contact lenses, if present and easy to do
Continue rinsing
Get medical advice/attention
Remove contact lens(es) if able to do so during rinsing
Immediately call a POISON CONTROL CENTER or seek medical attention

After swallowing:

Rinse mouth and then drink plenty of water
Do not induce vomiting
Get medical advice/attention if you feel unwell
Immediately call a POISON CONTROL CENTER or seek medical attention

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:

Wear protective eye wear, gloves and clothing
Refer to Section 8
Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Heating causes a rise in pressure, risk of bursting and combustion
Shut off sources of ignition
Carbon monoxide and carbon dioxide may form upon combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation
Ensure air handling systems are operational
Wear protective eye wear, gloves and clothing

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Environmental precautions:

Should not be released into the environment

Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders)

Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Do not eat, drink, smoke or use personal products when handling chemical substances.

Avoid breathing mist or vapor.

Use only with adequate ventilation.

Conditions for safe storage, including any incompatibilities:

Store in a cool, well-ventilated area.

Store away from foodstuffs.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Hydrochloric acid	7647-01-0	ACGIH TLV C 2.0 ppm
	Cobalt Chloride	7646-79-9	8-Hour Exposure Limit (TLV-TWA): 0.02 mg/m³
	Potassium Hexachloroplatinate (IV)	16921-30-5	ACGIH TLV 0.002 mg/m³, as Pt (soluble salts)
United States (OSHA)	Hydrochloric acid	7647-01-0	OSHA PEL C 5.0 ppm
	Hydrochloric acid	7647-01-0	OSHA PEL C 7.0 mg/m³
	Potassium Hexachloroplatinate (IV)	16921-30-5	OSHA PEL 0.002 mg/m³, as Pt (soluble salts)
NIOSH	Hydrochloric acid	7647-01-0	NIOSH REL C 5.0 ppm
	Hydrochloric acid	7647-01-0	NIOSH REL C 7.0 mg/m³
	Potassium Hexachloroplatinate (IV)	16921-30-5	NIOSH IDLH 4 mg/m³, as Pt (soluble salts)
Japan	Cobalt Chloride	7646-79-9	ISHL OELs - Threshold limit value: 0.02 mg/m³
	Cobalt Chloride	7646-79-9	JSOH OEL: TWA: 0.05 mg/m³
Bulgaria	Cobalt Chloride	7646-79-9	TWA: 0.1 mg/m³
Croatia	Cobalt Chloride	7646-79-9	Maximum (8 hr) allowable concentration: 0.1 mg/m³
Czech Republic	Cobalt Chloride	7646-79-9	8-hour TWA: 0.05 mg/m³
	Cobalt Chloride	7646-79-9	Ceiling limit (NPK-P): 0.1 mg/m³
Estonia	Cobalt Chloride	7646-79-9	8-hour TWA: 0.05 mg/m³
Hungary	Cobalt Chloride	7646-79-9	8-hour TWA (ÁK Value): 0.1 mg/m³

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Cobalt Chloride	7646-79-9	60-minute STEL (CK Value): 0.4 mg/m³
Lithuania	Cobalt Chloride	7646-79-9	8-hour TWA: 0.05 mg/m³
Poland	Cobalt Chloride	7646-79-9	8-hour TWA (NDS): 0.02 mg/m³
Slovakia	Cobalt Chloride	7646-79-9	8-hour TWA (NPEL): 0.05 mg/m³
Denmark	Cobalt Chloride	7646-79-9	TWA: 0.01 mg/m³
Finland	Cobalt Chloride	7646-79-9	8-hour limit: 0.02 mg/m³
Greece	Cobalt Chloride	7646-79-9	8-hour TWA: 0.1 mg/m³
Ireland	Cobalt Chloride	7646-79-9	8-hour OEL (TWA): 0.1 mg/m³
Italy	Cobalt Chloride	7646-79-9	8-hour TWA: 0.02 mg/m³
Portugal	Cobalt Chloride	7646-79-9	8-hour exposure limit: 0.02 mg/m³
Spain	Cobalt Chloride	7646-79-9	8-hour daily exposure limit (VLA_ED): 0.02 mg/m³
Sweden	Cobalt Chloride	7646-79-9	Level Limit Value (NGV): 0.02 mg/m³
United Kingdom	Cobalt Chloride	7646-79-9	TWA: 0.1 mg/m³
Brazil	Cobalt Chloride	7646-79-9	8-Hour Exposure Limit (TLV-TWA): 0.02 mg/m³
Canada	Cobalt Chloride	7646-79-9	Alberta OELs - 8-Hour TWA Exposure Limit: 0.02 mg/m³
	Cobalt Chloride	7646-79-9	British Columbia OELs - 8-Hour TWA Exposure Limit: 0.02 mg/m³
	Cobalt Chloride	7646-79-9	Manitoba OELs - 8-hour Exposure Limit (TLV-TWA): 0.02 mg/m³
	Cobalt Chloride	7646-79-9	Ontario OELs - 8-Hour TWA Exposure Limit: 0.02 mg/m³
	Cobalt Chloride	7646-79-9	Quebec OELs - 8-Hour TWA Exposure Value: 0.02 mg/m³
	Cobalt Chloride	7646-79-9	Saskatchewan OELs - 8 Hour Average Contamination Limit: 0.02 mg/m³
	Cobalt Chloride	7646-79-9	Saskatchewan OELs - 15 Minute Average Contamination Limit: 0.06 mg/m³
Mexico	Cobalt Chloride	7646-79-9	NOM-010-STPS-2014: Time Weighted Average Exposure Limit Value (VLE-PPT): 0.02 mg/m³

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Not determined or not applicable.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

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Eye and face protection:
Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:
Select glove material impermeable and resistant to the substance.

Respiratory protection:
When necessary, use NIOSH-approved breathing equipment.

General hygienic measures:
Wash hands before breaks and at the end of work.
Avoid contact with skin, eyes and clothing.
Perform routine housekeeping.
Wash contaminated clothing before reusing.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear, yellow liquid
Odor	Odorless
Odor threshold	Not determined or not available.
pH	~1
Melting point/freezing point	Estimation: -6 °C (22 °F)
Initial boiling point/range	Estimation: 102 °C (215 °F)
Flash point (closed cup)	Not determined or not available.
Evaporation rate	0.963
Flammability (solid, gas)	Not Flammable, but reacts with most metals to form flammable hydrogen gas
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	Estimation: 17.10 mm Hg (2.22 kPa) at 20 °C (68 °F)
Vapor density	Estimation: 0.64 at 20 °C (68 °F)
Density	Not determined or not available.
Relative density	1.02
Solubilities	Soluble in water and acid
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	~ 1.1 mPa*s
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

SECTION 10: Stability and reactivity

Reactivity:
Does not react under normal conditions of use and storage.

Chemical stability:

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Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

Incompatible materials. Excess heat. Evaporation. Freezing conditions. Contact with acid or acid fumes.

Incompatible materials:

Alkali metals, alkalies, metals, fluorine, strong acids, and strong bases.

Hazardous decomposition products:

Heating to decomposition releases toxic and/or corrosive fumes of: hydrogen chloride. Reacts with most metals to form Hydrogen gas.

SECTION 11: Toxicological information

Acute toxicity

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

Product data: No data available.

Substance data:

Name	Route	Result
Hydrochloric acid	inhalation	LC50 - Mouse - 1,108 ppm / 1h
	oral	LD50 Rabbit: 900 mg/kg
Cobalt Chloride	oral	LD50 - Rat - 418 mg/kg
Potassium Hexachloroplatinate (IV)	oral	LD50 Rat: 184 - 212 mg/kg bw

Skin corrosion/irritation

Assessment: Causes severe skin burns and eye damage

Product data: No data available.

Substance data:

Name	Result
Hydrochloric acid	Causes severe skin burns and eye damage.

Serious eye damage/irritation

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

Product data: No data available.

Substance data: No data available.

Respiratory or skin sensitization

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

Product data: No data available.

Substance data:

Name	Result
Cobalt Chloride	May cause an allergic skin reaction.
	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Carcinogenicity

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

Product data: No data available.

Substance data:

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Name	Species	Result
Cobalt Chloride		May cause cancer.

International Agency for Research on Cancer (IARC):

Name	Classification
Hydrochloric acid	Group 3 - Not classifiable as to its carcinogenicity to humans
Cobalt Chloride	Group 2B

National Toxicology Program (NTP):

Name	Classification
Cobalt Chloride	Reasonably anticipated to be human carcinogens

Germ cell mutagenicity

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

Product data: No data available.

Substance data:

Name	Result
Cobalt Chloride	Suspected of causing genetic defects.

Reproductive toxicity

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

Product data: No data available.

Substance data:

Name	Result
Cobalt Chloride	May damage fertility or the unborn child.

Specific target organ toxicity (single exposure)

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

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

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

Product data: No data available.

Substance data: No data available.

Aspiration toxicity

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

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

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

Product data: No data available.

Substance data:

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Name	Result
Hydrochloric acid	LC50: 282 mg/L (96Hr)
Potassium Hexachloroplatinate (IV)	LC50 (4 days): 25.78 - 76.55 mg/L

Chronic (long-term) toxicity

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11) EPA Waste ID Number: D002. Special Instructions (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. Otherwise, Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals. Empty Containers: Working in a well-ventilated area, Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state or federal regulations. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P. A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste. Dispose of empty container as normal trash. NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	3264
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrogen Chloride)
UN transport hazard class(es)	8 
Packing group	III
Environmental hazards	None
Special precautions for user	None

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Reportable quantity	5000
Excepted quantities	30g/30mL
Passenger air/rail	5L
Cargo aircraft only	60L
Stowage category	A

International Maritime Dangerous Goods (IMDG)

UN number	3264
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrogen Chloride)
UN transport hazard class(es)	8 
Packing group	III
Environmental hazards	None
Special precautions for user	None
Excepted quantities	30g/30mL
Limited quantity	5L

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	3264
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrogen Chloride)
UN transport hazard class(es)	8 
Packing group	III
Environmental hazards	None
Special precautions for user	None
Excepted quantities	30g/30mL
Passenger and cargo	5L
Cargo aircraft only	60L
Limited quantity	5L

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

7647-01-0	Hydrochloric acid	Listed
7646-79-9	Cobalt Chloride	Listed
7732-18-5	Demineralized Water	Listed
16921-30-5	Potassium Hexachloroplatinate (IV)	Listed

Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 311/312 hazards:

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Acute	Chronic	Fire	Pressure	Reactive
No	No	No	No	No

SARA Section 302 extremely hazardous substances:

7647-01-0	Hydrochloric acid	Listed

SARA Section 313 toxic chemicals:

7647-01-0	Hydrochloric acid	Listed
7646-79-9	Cobalt Chloride	Not Listed
7732-18-5	Demineralized Water	Not Listed
16921-30-5	Potassium Hexachloroplatinate (IV)	Not Listed

CERCLA:

7647-01-0	Hydrochloric acid	Listed	5000 lbs.

RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA):

7647-01-0	Hydrochloric acid	Listed

Massachusetts Right to Know:

7647-01-0	Hydrochloric acid	Listed
7646-79-9	Cobalt Chloride	Not Listed
7732-18-5	Demineralized Water	Not Listed
16921-30-5	Potassium Hexachloroplatinate (IV)	Not Listed

New Jersey Right to Know:

7647-01-0	Hydrochloric acid	Listed
7646-79-9	Cobalt Chloride	Listed
7732-18-5	Demineralized Water	Not Listed
16921-30-5	Potassium Hexachloroplatinate (IV)	Not Listed

New York Right to Know:

7647-01-0	Hydrochloric acid	Listed
7646-79-9	Cobalt Chloride	Listed
7732-18-5	Demineralized Water	Not Listed
16921-30-5	Potassium Hexachloroplatinate (IV)	Listed

Pennsylvania Right to Know:

7647-01-0	Hydrochloric acid	Listed
7646-79-9	Cobalt Chloride	Listed
7732-18-5	Demineralized Water	Not Listed
16921-30-5	Potassium Hexachloroplatinate (IV)	Listed

California Proposition 65: None of the ingredients are listed.

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SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 3-0-0

HMIS: 3-0-0

Initial preparation date: 01.23.2018

End of Safety Data Sheet