RICCA CHEMICAL COMPANY®

Safety Data Sheet

Classified according to WHMIS 2015

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: EP Reference Solution B_5, Brown Reference Solution

Product Number: 2880.5

Other Identifying Product Numbers: 2880.5-32, 2880.5-4, R2880500-25C

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company: Ricca Chemical Company
Address: 448 West Fork Drive

Arlington, TX 76012 USA

Telephone: 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA)	800-424-9300
CHEMTREC (International)	1+ 703-527-3887

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard Statements	Precautionary Statements:
Skin Corrosion / Irritation	Category 1	H314	P260, P264, P280, P301+P330+P331, P303+P361+P353, P363, P304+P340, P310, P321, P305+P351+P338, P405, P501
Eye Damage / Irritation	Category 2	H319	P264, P280, P305+P351+P338, P337+P313
Respiratory Sensitizer	Category 1	H334	P261, P285, P304+P341, P342+P311, P501
Skin Sensitizer	Category 1	H317	P261, P272, P280, P302+P352, P332+P313, P321, P363, P501
Hazardous to the Aquatic Environment (Acute)	Category 3	H402	P273, P501
Hazardous to the Aquatic Environment (Chronic)	Category 3	H412	P273, P501

2.2. GHS Label Elements

Pictograms:

Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Precautionary Statements:

Precautionary Number	Precautionary Statement
P260	Do not breathe fumes, mist, vapors, or spray.
P261	Avoid breathing fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P272	Contaminated work clothing must not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.
P285	In case of inadequate ventilation wear respiratory protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P304+P341	IF INHALED: If breathing is difficult, remove person to fresh air and keep 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 physician.
P321	Specific treatment (Wash areas of contact with water).
P332+P313	If skin irritation occurs: Get medical attention.
P337+P313	If eye irritation persists: Get medical attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER or physician.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents in accordance with local, state, federal and international regulations.

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Water	H_2O	18.01 g/mol	7732-18-5	98.42
Hydrochloric Acid	HCl	36.46 g/mol	7647-01-0	1.00
Cobalt (II) Chloride Hexahydrate	$CoCl_2 \cdot 6H_2O$	237.93 g/mol	7791-13-1	0.22
Copper Sulfate Pentahydrate	$CuSO_4 \cdot 5H_2O$	249.68 g/mol	7758-99-8	0.19
Ferric Chloride Hexahydrate	$FeCl_3 \cdot 6H_2O$	270.30 g/mol	10025-77-1	0.17

SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, and tearing.

Inhalation: IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. May cause irritation, redness, and pain.

Ingestion: IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Dilute immediately with water or milk. Induce vomiting. Call a physician.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Mildly corrosive. Contains Cobalt Chloride, a possible carcinogen according to IARC (International Agency for Research on Cancer). May irritate eyes and skin. Wash areas of contact with water for at least 15 minutes. If ingested, dilute with water. Induce vomiting. Call a physician. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, redness, and pain. CHRONIC EFFECTS / CARCINOGENICITY: Repeated ingestion of large doses may cause liver damage.

4.3. Medical Attention or Special Treatment Needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops. Dilute immediately with water or milk. Induce vomiting. Call a physician.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire.

5.2. Specific Hazards Arising from the Substance or Mixture

Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment for Firefighters

Use protective clothing and breathing equipment appropriate for the surrounding fire.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

6.2. Cleanup and Containment Methods and Materials

Do not flush to sewer. Absorb with suitable material. Containerize for disposal with a hazardous waste disposal facility. Dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

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SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Ferric Chloride Hexahydrate (10025-77	TLV-TWA	USA	"1 mg/m³ TWA (as Fe)" As Iron salts, soluble [RR-00521-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Ferric Chloride Hexahydrate (10025-77	TLV-TWA	USA	"1 mg/m³ TWA (as Fe)" As Iron salts, soluble [RR-00521-0]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Ferric Chloride Hexahydrate (10025-77	TLV-TWA	USA	1 mg/m³ TWA (as Fe)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Hydrochloric Acid (7647-01-0)	TLV-Ceiling	USA	2 ppm Ceiling	ACGIH - Threshold Limit Values - Ceilings (TLV-C)
Hydrochloric Acid (7647-01-0)	PEL-Ceiling	USA	5 ppm Ceiling; 7 mg/m³ Ceiling	U.S. - OSHA - Final PELs - Ceiling Limits
Copper Sulfate Pentahydrate (7758-99	TLV-TWA	USA	"1 mg/m³ TWA (dust and mist, as Cu)" As Copper compounds [RR-00595-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper Sulfate Pentahydrate (7758-99	TLV-TWA	USA	"1 mg/m³ TWA (dust and mist, as Cu)" As Copper compounds [RR-00595-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper Sulfate Pentahydrate (7758-99	TLV-TWA	USA	"1 mg/m³ TWA (dust and mist, as Cu)" As Copper compounds [RR-00595-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper Sulfate Pentahydrate (7758-99	TLV-TWA	USA	1 mg/m³ TWA (dust and mist, as Cu)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper Sulfate Pentahydrate (7758-99	TLV-TWA	USA	"1 mg/m³ TWA (dust and mist, as Cu)" As Copper compounds [RR-00595-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper Sulfate Pentahydrate (7758-99	TLV-TWA	USA	"1 mg/m³ TWA (dust and mist, as Cu)" As Copper compounds [RR-00595-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Copper Sulfate Pentahydrate (7758-99	TLV-TWA	USA	"1 mg/m³ TWA (dust and mist, as Cu)" As Copper compounds [RR-00595-8]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

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Cobalt (II) Chloride Hexahydrate (7791 TLV-TWA	USA	"0.02 mg/m³ TWA (inhalable particulate matter, as Co)" As Cobalt inorganic compounds [RR-02516-1]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cobalt (II) Chloride Hexahydrate (7791 TLV-TWA	USA	"0.02 mg/m³ TWA (inhalable particulate matter, as Co)" As Cobalt inorganic compounds [RR-02516-1]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cobalt (II) Chloride Hexahydrate (7791 TLV-TWA	USA	0.02 mg/m³ TWA (inhalable particulate matter, as Co)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cobalt (II) Chloride Hexahydrate (7791 TLV-TWA	USA	"0.02 mg/m³ TWA (inhalable particulate matter, as Co)" As Cobalt inorganic compounds [RR-02516-1]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Cobalt (II) Chloride Hexahydrate (7791 TLV-TWA	USA	"0.02 mg/m³ TWA (inhalable particulate matter, as Co)" As Cobalt inorganic compounds [RR-02516-1]	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

8.2. Exposure Controls

Engineering Controls: No specific controls are needed. Normal room ventilation is adequate.

Respiratory Protection: In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate.

Skin Protection: Wear protective gloves and eye protection. Chemical resistant gloves.

Eye Protection: Wear protective gloves and eye protection. Safety glasses or goggles.

8.3. Personal Protective Equipment

Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection. Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.

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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Brown liquid
Physical State: Liquid
Odor: Data not available.
Odor Threshold: Data not available.
pH: Acidic
Melting/Freezing Point: 0.0°C
Initial Boiling Point/Range: 100°C - 100°C
Flash Point: Data not available.
Evaporation Rate: Data not available.
Flammability: Data not available.
Flammability/Explosive Limits: Data not available.
Vapor Pressure: Data not available.
Vapor Density: Data not available.
Relative Density: 1.01
Solubility: Miscible
Partition Coefficient: Data not available.
Auto-Ignition Temperature: Data not available.
Decomposition Temperature: Data not available.
Viscosity: Data not available.
Explosive Properties: Data not available.
Oxidizing Properties: Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Oxidizers, alkalis, most metals.

10.4. Hazardous Decomposition Products

Will not occur.

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SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not applicable.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

LD50, Oral, Rabbit (Hydrochloric Acid) 900 mg/kg, 300 mg/kg (Copper Sulfate), details of toxic effects not reported other than lethal dose value. LD50, Oral, Rat: (Cobalt Chloride) 766 mg/kg, behavioral gastrointestinal and nutritional effects noted. LD50, Dermal, Rat: (Cobalt Chloride) > 2 gm/kg, details of toxic effects not reported other than lethal dose value. LDLo, Oral, Rat (Ferric Chloride Hexahydrate) 900 mg/kg; Details of toxic effects not reported other than lethal dose value.

Skin Corrosion and Irritation:

Causes severe skin burns and eye damage. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Serious Eye Damage and Irritation:

Causes serious eye irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Respiratory Sensitization:

May cause allergy or asthma symptoms or breathing difficulties if inhaled. Avoid breathing fumes, mist, vapors, or spray. In case of inadequate ventilation wear respiratory protection. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Dispose of contents in accordance with local, state, federal and international regulations.

Skin Sensitization:

May cause an allergic skin reaction. Avoid breathing fumes, mist, vapors, or spray. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical attention. Specific treatment (Wash areas of contact with water). Wash contaminated clothing before reuse. Dispose of contents in accordance with local, state, federal and international regulations.

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

Not applicable.

Reproductive Toxicity:

Not applicable.

Specific Target Organ Toxicity from Single Exposure:

Not applicable.

Specific Target Organ Toxicity from Repeated Exposure:

Not applicable.

Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Harmful to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations. Harmful to aquatic life with long lasting effects. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

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SECTION 14: Transportation Information

14.1. Transportation by Land-Department of Transportation (DOT, United States of America)

Not regulated according to DOT Regulations.

14.2. Transportation by Air - International Air Transport Association (IATA)

Not regulated according to IATA Dangerous Goods Regulations.

14.3 Transportation of Dangerous Goods (TDG, Canada)

Not regulated according to TDG Regulations.

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SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Hydrochloric Acid (CAS # 7647-01-0): 500 lb TPQ (gas only)
Hydrochloric Acid (CAS # 7647-01-0): 5000 lb EPCRA RQ (gas only)

15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Ferric Chloride Hexahydrate (CAS # 10025-77-1): 1000 lb final RQ; 454 kg final RQ
Hydrochloric Acid (CAS # 7647-01-0): 5000 lb final RQ; 2270 kg final RQ
Copper Sulfate Pentahydrate (CAS # 7758-99-8): 10 lb final RQ; 4.54 kg final RQ

15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Hydrochloric Acid (CAS # 7647-01-0): 1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)
Copper Sulfate Pentahydrate (CAS # 7758-99-8): "1.0 % de minimis concentration (includes any unique chemical substance that contains Copper as part of that chemical's infrastructure except for CAS numbers 147-14-8, 1328-53-6, or 14302-13-7, or copper phthalocyanine compounds that are substituted with only Hydrogen and/or Bromine and/or Chlorine that meet the molecular structure specified within the regulation, listed under Chemical Category N100)" As Copper compounds [RR-00595-8]
Copper Sulfate Pentahydrate (CAS # 7758-99-8): 1.0 % de minimis concentration (includes any unique chemical substance that contains Copper as part of that chemical's infrastructure except for CAS numbers 147-14-8, 1328-53-6, or 14302-13-7, or copper phthalocyanine compounds that are substituted with only Hydrogen and/or Bromine and/or Chlorine that meet the molecular structure specified within the regulation, listed under Chemical Category N100)
Cobalt (II) Chloride Hexahydrate (CAS # 7791-13-1): "0.1 % de minimis concentration (includes any unique chemical substance that contains Cobalt as part of that chemical's infrastructure, listed under Chemical Category N096)" As Cobalt, inorganic compounds [RR-02516-1]
Cobalt (II) Chloride Hexahydrate (CAS # 7791-13-1): 0.1 % de minimis concentration (includes any unique chemical substance that contains Cobalt as part of that chemical's infrastructure, listed under Chemical Category N096)

15.5. Massachusetts Right-to-Know Substance List

Ferric Chloride Hexahydrate (CAS # 10025-77-1): Present
Hydrochloric Acid (CAS # 7647-01-0): Extraordinarily hazardous
Copper Sulfate Pentahydrate (CAS # 7758-99-8): Present

15.6. Pennsylvania Right-to-Know Hazardous Substances

Ferric Chloride Hexahydrate (CAS # 10025-77-1): "Environmental hazard" As Iron salts [RR-04647-9]
Ferric Chloride Hexahydrate (CAS # 10025-77-1): "Present" As Iron salts [RR-04647-9]
Ferric Chloride Hexahydrate (CAS # 10025-77-1): Environmental hazard
Ferric Chloride Hexahydrate (CAS # 10025-77-1): Present
Hydrochloric Acid (CAS # 7647-01-0): Environmental hazard
Hydrochloric Acid (CAS # 7647-01-0): Present
Water (CAS # 7732-18-5): "Present" As Ethyl alcohol and water [RR-00802-6]
Water (CAS # 7732-18-5): Present
Copper Sulfate Pentahydrate (CAS # 7758-99-8): "Environmental hazard" As Copper compounds [RR-00595-8]
Copper Sulfate Pentahydrate (CAS # 7758-99-8): "Present" As Copper compounds [RR-00595-8]
Copper Sulfate Pentahydrate (CAS # 7758-99-8): Environmental hazard
Copper Sulfate Pentahydrate (CAS # 7758-99-8): Present
Cobalt (II) Chloride Hexahydrate (CAS # 7791-13-1): "Environmental hazard" As Cobalt compounds [RR-00107-0]
Cobalt (II) Chloride Hexahydrate (CAS # 7791-13-1): "Present" As Cobalt compounds [RR-00107-0]
Cobalt (II) Chloride Hexahydrate (CAS # 7791-13-1): Environmental hazard
Cobalt (II) Chloride Hexahydrate (CAS # 7791-13-1): Present

15.7. New Jersey Worker and Community Right-to-Know Components

Ferric Chloride Hexahydrate (CAS # 10025-77-1): corrosive
Ferric Chloride Hexahydrate (CAS # 10025-77-1): sn 1034
Hydrochloric Acid (CAS # 7647-01-0): corrosive
Hydrochloric Acid (CAS # 7647-01-0): sn 1012
Hydrochloric Acid (CAS # 7647-01-0): SN 1012 500 lb TPQ; SN 2909 500 lb TPQ (gas only)
Copper Sulfate Pentahydrate (CAS # 7758-99-8): "SN 2215 500 lb TPQ (except C.I. Pigment Blue 15 (CAS 147-14-8), C.I. Pigment Green 7 (CAS 1328-53-6), and C.I. Pigment Green 36 (CAS 14302-13-7), and Copper phthalocyanine compounds that are substituted with only Hydrogen, and/or Chlorine, and/or Bromine, Category Code N100. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Copper compounds [RR-00595-8]
Copper Sulfate Pentahydrate (CAS # 7758-99-8): "sn 2215" As Copper compounds [RR-00595-8]
Copper Sulfate Pentahydrate (CAS # 7758-99-8): sn 0549
Copper Sulfate Pentahydrate (CAS # 7758-99-8): sn 2215
Copper Sulfate Pentahydrate (CAS # 7758-99-8): SN 2215 500 lb TPQ (except C.I. Pigment Blue 15 (CAS 147-14-8), C.I. Pigment Green 7 (CAS 1328-53-6), and C.I. Pigment Green 36 (CAS 14302-13-7), and Copper phthalocyanine compounds that are substituted with only Hydrogen, and/or Chlorine, and/or Bromine, Category Code N100. Includes any unique chemical substance that contains the named metal as part of that chemical structure)
Cobalt (II) Chloride Hexahydrate (CAS # 7791-13-1): "carcinogen" As Cobalt compounds [RR-00107-0]
Cobalt (II) Chloride Hexahydrate (CAS # 7791-13-1): "SN 2222 500 lb TPQ (Category Code N096. Includes any unique chemical substance that contains the named metal as part of that chemical structure)" As Cobalt compounds [RR-00107-0]
Cobalt (II) Chloride Hexahydrate (CAS # 7791-13-1): "sn 2222" As Cobalt compounds [RR-00107-0]
Cobalt (II) Chloride Hexahydrate (CAS # 7791-13-1): carcinogen
Cobalt (II) Chloride Hexahydrate (CAS # 7791-13-1): sn 2222
Cobalt (II) Chloride Hexahydrate (CAS # 7791-13-1): SN 2222 500 lb T

15.8. California Proposition 65

Not listed.

15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Ferric Chloride Hexahydrate (CAS # 10025-77-1): Present (DSL)
Hydrochloric Acid (CAS # 7647-01-0): Present (DSL)
Water (CAS # 7732-18-5): Present (DSL)
Copper Sulfate Pentahydrate (CAS # 7758-99-8): Present (DSL)
Cobalt (II) Chloride Hexahydrate (CAS # 7791-13-1): Present (DSL)

15.10. United States of America Toxic Substances Control Act (TSCA) List

All components of this solution are listed as active on the TSCA Inventory or are mixtures (hydrates) of active items listed on the TSCA Inventory.

Ferric Chloride Hexahydrate (CAS # 10025-77-1): Present (ACTIVE)
Hydrochloric Acid (CAS # 7647-01-0): Present (ACTIVE)
Water (CAS # 7732-18-5): Present (ACTIVE)
Copper Sulfate Pentahydrate (CAS # 7758-99-8): Present (ACTIVE)
Cobalt (II) Chloride Hexahydrate (CAS # 7791-13-1): Present (ACTIVE)

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Ferric Chloride Hexahydrate (CAS # 10025-77-1): 231-729-4
Hydrochloric Acid (CAS # 7647-01-0): 231-595-7
Water (CAS # 7732-18-5): 231-791-2
Copper Sulfate Pentahydrate (CAS # 7758-99-8): 231-847-6
Cobalt (II) Chloride Hexahydrate (CAS # 7791-13-1): 231-589-4

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Harmful to aquatic life with long lasting effects.

Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves and eye protection. In case of inadequate ventilation wear respiratory protection.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). If skin irritation occurs: Get medical attention. If eye irritation persists: Get medical attention. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Wash contaminated clothing before reuse.

Store locked up.

Dispose of contents in accordance with local, state, federal and international regulations.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.
Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.
Biohazardous Infectious Materials Hazard Class: Not Applicable.

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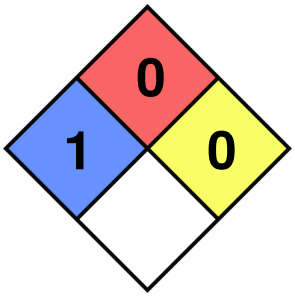
16.3. National Fire Protection Association (NFPA) Rating

Health:	1
Flammability:	0
Reactivity:	0
Special Hazard:	



16.4. Document Revision

Last Revision Date: 2024-03-03

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.