



Safety Data Sheet

Classified according to WHMIS 2015

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: HydroSpec[®] Coulometric AG
General Purpose Anolyte Solution for Cells With or Without Diaphragm

Product Number: RK100000

Other Identifying Product Numbers: RK100000-1C, RK100000-500C

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

Safety Data Sheet

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:
Acute Toxicity - Oral	Category 3	H301	P264, P270, P301+P310, P321, P330, P405, P501
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 1	H318	P280, P305+P351+P338, P310
Germ Cell Mutagenicity	Category 2	H341	P201, P202, P280, P308+P313, P405, P501
Carcinogenicity	Category 2	H351	P201, P202, P280, P308+P313, P405, P501
Reproductive Toxicity	Category 1	H360	P201, P202, P280, P308+P313, P405, P501
Specific Target Organs/Systemic Toxicity Following Single Exposure	Category 2	H371	P260, P264, P270, P308+P311, P405, P501
Specific Target Organs/Systemic Toxicity Following Repeated Exposure	Category 2	H373	P260, P314, P501
Flammable Liquids	Category 2	H225	P210, P233, P240, P241, P242, P243, P280, P303+P361+P353, P370+P378, P403+P235, P501

2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Safety Data Sheet

Hazard Statements:

Hazard Number	Hazard Statement
H225	Highly flammable liquid and vapor.
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H371	May cause damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.

Safety Data Sheet

Precautionary Statements:

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, sparks and open flame. No smoking.
P233	Keep container tightly closed.
P240	Ground container and receiving equipment.
P241	Use explosion-proof equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe fumes, mist, vapors, or spray.
P264	Wash arms, hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves and eye protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or physician.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
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.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311	IF exposed or concerned: Call a POISON CENTER or physician.
P308+P313	IF exposed or concerned: Get medical attention.
P310	Immediately call a POISON CENTER or physician.
P314	Get medical attention if you feel unwell.
P321	Specific treatment (Wash areas of contact with water.)
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
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.

Safety Data Sheet

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Methyl Alcohol	CH ₃ OH	32.04 g/mol	67-56-1	65.00
Sulfur Dioxide	SO ₂	64.06 g/mol	7446-09-5	10.00
Imidazole	NHCH:NCH:CH	68.07 g/mol	288-32-4	10.00
Diethanolamine	C ₄ H ₁₁ NO ₂	105.13 g/mol	111-42-2	10.00
Imidazolium Iodide	C ₃ H ₄ N ₂ ·HI	195.99 g/mol	68007-08-9	5.00

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 with burning and stinging with possible damage to the cornea and conjunctiva.

Inhalation: IF INHALED: 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. Results in drying and cracking which can lead to secondary infections and dermatitis. Dermal absorption causes many of the symptoms of inhalation.

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

Toxic if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. Suspected of causing genetic defects. Suspected of causing cancer. May damage fertility or the unborn child. May cause damage to organs. May cause damage to organs through prolonged or repeated exposure. Flammable liquid. Primarily toxic by ingestion. Cannot be made non-poisonous. If ingested, give large quantity of water and induce vomiting. Call a physician. Contact may cause dryness and cracking of the skin. May cause irritation to the eyes. Wash areas of contact with water. May cause irritation to the respiratory system. EYE CONTACT: May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva. SKIN CONTACT: Results in drying and cracking which can lead to secondary infections and dermatitis. Dermal absorption causes many of the symptoms of inhalation.

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.



Safety Data Sheet

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

In case of fire: Use dry chemical, foam or carbon dioxide to extinguish. Water, dry chemical, foam, or carbon dioxide. Water spray may be used to keep fire-exposed containers cool.

5.2. Specific Hazards Arising from the Substance or Mixture

Highly flammable liquid and vapor. Moderate explosion hazard and dangerous fire hazard when exposed to heat, sparks and open flames. Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Sensitive to static discharge.

5.3. Special Protective Equipment for Firefighters

Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves and eye protection.

6.2. Cleanup and Containment Methods and Materials

Remove all sources of ignition. Contain spill. Do not flush to sewer. Absorb with suitable inert material (vermiculite, dry sand, etc) and place in a chemical waste container for proper disposal in an approved waste disposal facility. Ventilate area of spill. Have extinguishing agent available in case of fire. Use non-sparking tools and equipment. 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. Store in secure, flammable storage area away from all sources of ignition. Empty containers may be hazardous since they retain product residues.

Safety Data Sheet

SECTION 8: Exposure Controls / Personal Protection

8.1 Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Diethanolamine (111-42-2)	TLV-TWA	USA	1 mg/m ³ TWA (inhalable fraction and vapor)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Methyl Alcohol (67-56-1)	TWA	USA	200 ppm TWA; 260 mg/m ³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Methyl Alcohol (67-56-1)	TLV-STEL	USA	250 ppm STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)
Methyl Alcohol (67-56-1)	TLV-TWA	USA	200 ppm TWA	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)
Sulfur Dioxide (7446-09-5)	TWA	USA	5 ppm TWA; 13 mg/m ³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Sulfur Dioxide (7446-09-5)	TLV-STEL	USA	0.25 ppm STEL	ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

8.2. Exposure Controls

Engineering Controls: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source. Use explosion proof equipment.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved atmosphere supplied respirator must be worn.

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. If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved atmosphere supplied respirator must be worn. Chemical resistant gloves. Safety glasses or goggles.



Safety Data Sheet

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance: Colorless to light yellow

Physical State: Liquid

Odor: Data not available.

Odor Threshold: Data not available.

pH: 5.0-6.0

Melting/Freezing Point: Data not Available

Initial Boiling Point/Range: 63°C - 63°C

Flash Point: 14°C - closed cup

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: 0.93

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

Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Zinc, Oxidizing agents, Alkali metals, Iron, Copper, Acid chlorides, Acid anhydrides, Reducing agents, Acids, heat sparks and open flame.

Safety Data Sheet

10.4. Hazardous Decomposition Products

Will not occur. May form carbon oxides, nitrogen oxides, sulfur oxides, hydrogen iodide, hydrogen cyanide (hydrocyanic acid) in the case of fire.

SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Toxic if swallowed. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water.). Rinse mouth. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

LD50, Oral, Rat: (Methanol) 5628 mg/kg, details of toxic effects not reported other than lethal dose value. Investigated as a mutagen and reproductive effector.

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 damage. 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. Immediately call a POISON CENTER or physician.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

Not applicable.

Germ Cell Mutagenicity:

Suspected of causing genetic defects. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Carcinogenicity:

Suspected of causing cancer. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.



Safety Data Sheet

Reproductive Toxicity:

May damage fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Single Exposure:

May cause damage to organs. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed or concerned: Call a POISON CENTER or physician. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Specific Target Organ Toxicity from Repeated Exposure:

May cause damage to organs through prolonged or repeated exposure. Do not breathe fumes, mist, vapors, or spray. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Not applicable.

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.

Safety Data Sheet

SECTION 14: Transportation Information

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

Sizes: 1 L, 6 L, 220 mL, 500 mL, 3000 mL

UN Number: UN1230

Proper Shipping Name: Methanol Solution

Hazard Class: 3

Packing Group: II

Hazard Label(s):



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

Sizes: 1 L, 6 L, 220 mL, 500 mL, 3000 mL

UN Number: UN1230

Proper Shipping Name: Methanol Solution

Hazard Class: 3 (6.1)

Packing Group: II

Hazard Label(s):



14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 1 L, 6 L, 220 mL, 500 mL, 3000 mL

UN Number: UN1230

Proper Shipping Name: METHANOL SOLUTION

Hazard Class: 3

Packing Group: II

Hazard Label(s):



Safety Data Sheet

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

Sulfur Dioxide (CAS # 7446-09-5): 500 lb EPCRA RQ

Sulfur Dioxide (CAS # 7446-09-5): 500 lb TPQ

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

Diethanolamine (CAS # 111-42-2): 100 lb final RQ; 45.4 kg final RQ

Methyl Alcohol (CAS # 67-56-1): 5000 lb final RQ; 2270 kg final RQ

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

Diethanolamine (CAS # 111-42-2): 1.0 % de minimis concentration

Methyl Alcohol (CAS # 67-56-1): 1.0 % de minimis concentration

15.5. Massachusetts Right-to-Know Substance List

Diethanolamine (CAS # 111-42-2): Present

Methyl Alcohol (CAS # 67-56-1): Present

Sulfur Dioxide (CAS # 7446-09-5): Extraordinarily hazardous

15.6. Pennsylvania Right-to-Know Hazardous Substances

Diethanolamine (CAS # 111-42-2): Environmental hazard

Diethanolamine (CAS # 111-42-2): Present

Methyl Alcohol (CAS # 67-56-1): "Present" As Denatured alcohols [RR-00113-8]

Methyl Alcohol (CAS # 67-56-1): Environmental hazard

Methyl Alcohol (CAS # 67-56-1): Present

Sulfur Dioxide (CAS # 7446-09-5): Environmental hazard

Sulfur Dioxide (CAS # 7446-09-5): Present

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

Diethanolamine (CAS # 111-42-2): corrosive

Diethanolamine (CAS # 111-42-2): sn 0686

Diethanolamine (CAS # 111-42-2): SN 0686 500 lb TPQ

Methyl Alcohol (CAS # 67-56-1): flammable - third degree; teratogen

Methyl Alcohol (CAS # 67-56-1): sn 1222

Methyl Alcohol (CAS # 67-56-1): SN 1222 500 lb TPQ

Sulfur Dioxide (CAS # 7446-09-5): sn 1759

Sulfur Dioxide (CAS # 7446-09-5): SN 1759 500 lb TPQ

15.8. California Proposition 65

Diethanolamine (CAS # 111-42-2): carcinogen, 6/22/2012

Methyl Alcohol (CAS # 67-56-1): developmental toxicity, 3/16/2012

Sulfur Dioxide (CAS # 7446-09-5): developmental toxicity, 7/29/2011

Safety Data Sheet

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

Diethanolamine (CAS # 111-42-2): Present (DSL)
Imidazole (CAS # 288-32-4): Present (DSL)
Methyl Alcohol (CAS # 67-56-1): Present (DSL)
Methyl Alcohol (CAS # 67-56-1): Present (NDSL)
Sulfur Dioxide (CAS # 7446-09-5): 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.

Diethanolamine (CAS # 111-42-2): Present (ACTIVE)
Imidazole (CAS # 288-32-4): Present (ACTIVE)
Methyl Alcohol (CAS # 67-56-1): Present (ACTIVE)
Sulfur Dioxide (CAS # 7446-09-5): Present (ACTIVE)

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

Diethanolamine (CAS # 111-42-2): 203-868-0
Diethanolamine (CAS # 111-42-2): EC No. 403-410-1
Imidazole (CAS # 288-32-4): 206-019-2
Methyl Alcohol (CAS # 67-56-1): 200-659-6
Methyl Alcohol (CAS # 67-56-1): 270-649-4
Imidazolium Iodide (CAS # 68007-08-9): EC No. 460-240-0
Sulfur Dioxide (CAS # 7446-09-5): 231-195-2

Safety Data Sheet

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

Highly flammable liquid and vapor. Toxic if swallowed. Causes severe skin burns and eye damage. Suspected of causing genetic defects. Suspected of causing cancer. May damage fertility or the unborn child. May cause damage to organs. May cause damage to organs through prolonged or repeated exposure.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks and open flame. No smoking. Keep container tightly closed. Ground container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves and eye protection.

IF SWALLOWED: Immediately call a POISON CENTER or physician. 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. IF exposed or concerned: Call a POISON CENTER or physician. Get medical attention if you feel unwell. Specific treatment (Wash areas of contact with water.). Wash contaminated clothing before reuse. In case of fire: Use dry chemical, foam or carbon dioxide to extinguish.

Store in a well-ventilated place. Keep cool. 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.

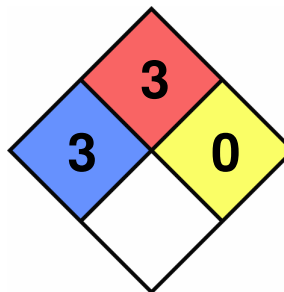
Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.

Biohazardous Infectious Materials Hazard Class: Not Applicable.

16.3. National Fire Protection Association (NFPA) Rating

Health: 3
Flammability: 3
Reactivity: 0
Special Hazard:





Safety Data Sheet

16.4. Document Revision

Last Revision Date: 2024-03-05

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.