



Be Right™

SAFETY DATA SHEET

Issue Date 14-Apr-2021

Revision Date 26-Jan-2024

Version 1.5

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1. IDENTIFICATION

Product identifier

Product Name Ammonium Chloride Reference Electrolyte Cartridge

Other means of identification

Product Code(s) 2595802

Safety data sheet number M01326

Recommended use of the chemical and restrictions on use

Recommended Use Reference electrode solution.

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)

Serious eye damage/eye irritation

Category 2A

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word

Warning



Hazard statements

H319 - Causes serious eye irritation

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Precautionary statements

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

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical attention

Other Hazards Known

Causes mild skin irritation

Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable

Mixture

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No	Percent Range	HMRIC #
1,2,3-Propanetriol	56-81-5	40 - 50%	-
Ammonium chloride	12125-02-9	10 - 13%	-
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	9036-19-5	<0.01%	-
Silver chloride	7783-90-6	<0.01%	-

4. FIRST AID MEASURES

Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

Inhalation

Remove to fresh air.

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 medical attention if irritation develops and persists.

Skin contact

Wash skin with soap and water.

Ingestion

Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.

Self-protection of the first aider

Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Symptoms

Burning sensation.

Indication of any immediate medical attention and special treatment needed

Note to physicians

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

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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	No information available.
Hazardous combustion products	Carbon monoxide, Carbon dioxide. Ammonia. Hydrogen chloride. Acrolein. 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. Use personal protective equipment as required.

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

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

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

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. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Flammability class Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
1,2,3-Propanetriol CAS#: 56-81-5	-	TWA: 15 mg/m ³ TWA: 5 mg/m ³ (vacated) TWA: 10 mg/m ³ (vacated) TWA: 5 mg/m ³	NDF
Ammonium chloride CAS#: 12125-02-9	STEL: 20 mg/m ³ fume TWA: 10 mg/m ³ fume	(vacated) TWA: 10 mg/m ³ (vacated) STEL: 20 mg/m ³	TWA: 10 mg/m ³ fume STEL: 20 mg/m ³ fume

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. 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 If splashes are likely to occur, wear safety glasses with side-shields.

Skin and body protection Wear suitable protective clothing. Avoid contact with eyes, skin and clothing.

General Hygiene Considerations Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this 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 Paste / Gel	Color	colorless
Appearance	gel aqueous solution	Odor threshold	No data available
Odor	Odorless		

Property	Values	Remarks • Method
Molecular weight	No data available	
pH	6 - 8	@ 20 °C
Melting point / freezing point	-16 °C / 3.2 °F	

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Initial boiling point and boiling range 105 °C / 221 °F

Evaporation rate No data available

Vapor pressure No data available

Relative vapor density 0.03

Specific gravity - VALUE 1 1.1

Partition coefficient Not applicable

Soil Organic Carbon-Water Partition Coefficient Not applicable

Autoignition temperature No data available

Decomposition temperature No data available

Dynamic viscosity ≥ 5200 cP (mPa s) at 20 °C / 68 °F

Kinematic viscosity ≥ 4727.273 cSt (mm²/s) at 20 °C / 68 °F

Solubility(ies)

Water solubility

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

Solubility in other solvents

Chemical Name	Solubility classification	Solubility	Solubility Temperature
None reported	No information available	No data available	No information available

Other information

Metal Corrosivity

Steel Corrosion Rate No data available

Aluminum Corrosion Rate No data available

Volatile Organic Compounds (VOC) Content

Chemical name	CAS No	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
1,2,3-Propanetriol	56-81-5	No data available	X
Ammonium chloride	12125-02-9	No data available	-
Poly(oxy-1,2-ethanediyl), .alpha.-[[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	9036-19-5	Not applicable	-
Silver chloride	7783-90-6	No data available	-

Explosive properties

Upper explosion limit No data available

Lower explosion limit No data available

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Flammable properties

Flash point No data available

Flammability Limit in Air

Upper flammability limit: No data available

Lower flammability limit: No data available

Oxidizing properties

No data available.

Bulk density

No data available

10. STABILITY AND REACTIVITY

Reactivity

Not applicable.

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

None known based on information supplied.

Incompatible materials

Strong oxidizing agents, strong acids, and strong bases.

Hazardous decomposition products

Acrolein. Carbon dioxide. Carbon monoxide. Ammonia.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation of respiratory tract.
Eye contact	Causes serious eye irritation. May cause redness, itching, and pain.
Skin contact	May cause irritation. Prolonged contact may cause redness and irritation.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Symptoms	May cause redness and tearing of the eyes.

Acute toxicity

Based on available data, the classification criteria are not met

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Mixture

No data available.

Ingredient Acute Toxicity Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,2,3-Propanetriol (40 - 50%) CAS#: 56-81-5	Rat LD ₅₀	12600 mg/kg	None reported	None reported	RTECS
Ammonium chloride (10 - 13%) CAS#: 12125-02-9	Rat LD ₅₀	1650 mg/kg	None reported	None reported	IUCLID
Poly(oxy-1,2-ethaned iyl), .alpha.-[(1,1,3,3-tetra methylbutyl)phenyl]-. omega.-hydroxy- (<0.01%) CAS#: 9036-19-5	Rat LD ₅₀	1700 mg/kg	None reported	None reported	NITE
Silver chloride (<0.01%) CAS#: 7783-90-6	Mouse LD ₅₀	> 10000 mg/kg	None reported	None reported	RTECS

Dermal Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,2,3-Propanetriol (40 - 50%) CAS#: 56-81-5	Rabbit LD ₅₀	> 10000 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

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

Mixture

No data available.

Ingredient Skin Corrosion/Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported	Exposure	Results	Key literature
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			dose	time		references and sources for data
Ammonium chloride (10 - 13%) CAS#: 12125-02-9	Existing human experience	Human	None reported	None reported	Mild skin irritant	RTECS
Poly(oxy-1,2-ethaned iyl), .alpha.-[(1,1,3,3-tetra methylbutyl)phenyl]-. omega.-hydroxy- (<0.01%) CAS#: 9036-19-5	Existing human experience	Human	None reported	None reported	Not corrosive or irritating to skin	Vendor SDS

Serious eye damage/irritation

Classification based on data available for ingredients. Irritating to eyes.

Mixture

No data available.

Ingredient Eye Damage/Eye Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Poly(oxy-1,2-ethaned iyl), .alpha.-[(1,1,3,3-tetra methylbutyl)phenyl]-. omega.-hydroxy- (<0.01%) CAS#: 9036-19-5	Standard Draize Test	Rabbit	100 mg	72 hours	Corrosive to eyes	RTECS

Respiratory or skin sensitization

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

Mixture

No data available.

Ingredient Sensitization Data

Test data reported below.

Skin Sensitization Exposure Route

Chemical name	Test method	Species	Results	Key literature references and sources for data
Ammonium chloride (10 - 13%) CAS#: 12125-02-9	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	OECD 429: Skin Sensitization: Local Lymph Node Assay

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

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,2,3-Propanetriol (40 - 50%) CAS#: 56-81-5	Human LD _{Lo}	1428 mg/kg	None reported	Kidney, Ureter, or Bladder Changes in tubules (including acute renal failure, acute tubular necrosis)	RTECS
Ammonium chloride (10 - 13%) CAS#: 12125-02-9	Domestic mammal - Not specified LD _{Lo}	1500 mg/kg	None reported	None reported	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

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,2,3-Propanetriol (40 - 50%) CAS#: 56-81-5	Rat TD _{Lo}	96000 mg/kg	30 days	Biochemical Enzyme inhibition, induction, or change in blood or tissue levels (true cholinesterase) Blood	RTECS
Ammonium chloride (10 - 13%) CAS#: 12125-02-9	Rat TD _{Lo}	3500 mg/kg	7 days	No toxicological effects observed	RTECS

Carcinogenicity

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

Mixture

No data available.

Ingredient Carcinogenicity Data

Test data reported below.

Chemical name	CAS No	ACGIH	IARC	NTP	OSHA
1,2,3-Propanetriol	56-81-5	-	-	-	-
Ammonium chloride	12125-02-9	-	-	-	-
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	9036-19-5	-	-	-	-
Silver chloride	7783-90-6	-	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA	Does not apply

Oral Exposure Route

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Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,2,3-Propanetriol (40 - 50%) CAS#: 56-81-5	Mouse	87500 mg/kg	25 weeks	Lungs, Thorax, or Respiration Tumors	RTECS

Germ cell mutagenicity

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

Mixture invitro Data

No data available.

Substance invitro Data

Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
1,2,3-Propanetriol (40 - 50%) CAS#: 56-81-5	DNA inhibition	Human lymphocyte	200 mmol/L	None reported	Positive test result for mutagenicity	RTECS
Ammonium chloride (10 - 13%) CAS#: 12125-02-9	OECD 471	<i>Salmonella typhimurium</i>	5 mg/plate	72 hours	Negative	RTECS
Poly(oxy-1,2-ethaned iyl), .alpha.-[(1,1,3,3-tetra methylbutyl)phenyl]-. omega.-hydroxy- (<0.01%) CAS#: 9036-19-5	DNA inhibition	Human lymphocyte	5 mg/L	None reported	Positive test result for mutagenicity	RTECS

Mixture invivo Data

No data available.

Substance invivo Data

Test data reported below.

Oral Exposure Route

Chemical name	Test	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
1,2,3-Propanetriol (40 - 50%) CAS#: 56-81-5	Cytogenetic analysis	Rat	1000 mg/kg	None reported	Positive test result for mutagenicity	RTECS
Poly(oxy-1,2-ethaned iyl), .alpha.-[(1,1,3,3-tetra methylbutyl)phenyl]-. omega.-hydroxy- (<0.01%) CAS#: 9036-19-5	None reported	Rat	10200 mg/kg	None reported	Positive test result for mutagenicity	Vendor SDS

Reproductive toxicity

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

Mixture

No data available.

Ingredient Reproductive Toxicity Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,2,3-Propanetriol (40 - 50%) CAS#: 56-81-5	Rat TD _{Lo}	100 mg/kg	None reported	Effects on Fertility Litter size (e.g. # fetuses per litter; measured before birth) Post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants)	RTECS
Ammonium chloride (10 - 13%) CAS#: 12125-02-9	Rat NOAEL	1500 mg/kg	16 days	None reported	ECHA

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**

Test data reported below.

Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Ammonium chloride (10 - 13%) CAS#: 12125-02-9	96 hours	<i>Oncorhynchus mykiss</i>	LC ₅₀	42.91 mg/L	ECHA
Poly(oxy-1,2-ethaned iyl), .alpha.-[(1,1,3,3-tetra methylbutyl)phenyl]-. omega.-hydroxy- (<0.01%) CAS#: 9036-19-5	96 hours	<i>Lepomis macrochirus</i>	LC ₅₀	>= 10 mg/L	Vendor SDS
Silver chloride (<0.01%) CAS#: 7783-90-6	96 hours	<i>Pimephales promelas</i>	LC ₅₀	0.0012 mg/L	ECHA

Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
1,2,3-Propanetriol (40 - 50%) CAS#: 56-81-5	48 Hours	<i>Daphnia magna</i>	LC ₅₀	1955 mg/L	IUCLID
Ammonium chloride (10 - 13%) CAS#: 12125-02-9	48 Hours	<i>Daphnia magna</i>	LC ₅₀	161 mg/L	IUCLID
Poly(oxy-1,2-ethaned iyl), .alpha.-[(1,1,3,3-tetra methylbutyl)phenyl]-. omega.-hydroxy- (<0.01%) CAS#: 9036-19-5	48 Hours	<i>Daphnia magna</i>	EC ₅₀	>= 18 mg/L	ERMA

Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Poly(oxy-1,2-ethaned iyl), .alpha.-[(1,1,3,3-tetra methylbutyl)phenyl]-. omega.-hydroxy- (<0.01%) CAS#: 9036-19-5	96 hours	<i>Selenastrum sp.</i>	EC ₅₀	0.21 mg/L	Vendor SDS

Aquatic Chronic Toxicity

Test data reported below.

Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
1,2,3-Propanetriol (40 - 50%) CAS#: 56-81-5	96 hours	<i>Oncorhynchus mykiss</i>	LC ₁₀₀	51000 mg/L	IUCLID
Poly(oxy-1,2-ethaned iyl), .alpha.-[(1,1,3,3-tetra methylbutyl)phenyl]-. omega.-hydroxy- (<0.01%) CAS#: 9036-19-5	7 days	<i>Oncorhynchus mykiss</i>	NOEC	0.004 mg/L	EPA
Silver chloride (<0.01%) CAS#: 7783-90-6	None reported	<i>Oncorhynchus mykiss</i>	EC ₁₀	0.00017 mg/L	No information available

Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Silver chloride (<0.01%) CAS#: 7783-90-6	None reported	<i>Pseudokirchneriella subcapitata</i>	EC ₁₀	0.00041 mg/L	No information available

Algae

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Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
Silver chloride (<0.01%) CAS#: 7783-90-6	None reported	<i>Salvinia natans</i>	EC ₁₀	0.0148 mg/L	No information available

Persistence and degradability

Mixture

No data available.

Mixture

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.

Special instructions for disposal

Dispose of material in an E.P.A. approved hazardous waste facility. Check with local municipal and state authorities and waste contractors for pertinent local information regarding the proper disposal of chemicals.

14. TRANSPORT INFORMATION

DOT

Not regulated

TDG

Not regulated

IATA

Not regulated

IMDG

Not regulated

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

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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 Does not comply
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

Chemical name	SARA 313 - Threshold Values %
Ammonium chloride (CAS #: 12125-02-9)	1.0
Silver chloride (CAS #: 7783-90-6)	1.0

SARA 311/312 Hazard Categories

Acute health hazard Yes
Chronic Health Hazard No
Fire hazard No
Sudden release of pressure hazard No
Reactive Hazard No

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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Ammonium chloride 12125-02-9	5000 lb	-	-	X
Silver chloride 7783-90-6	-	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

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Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ammonium chloride 12125-02-9	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

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
1,2,3-Propanetriol 56-81-5	X	X	X
Ammonium chloride 12125-02-9	X	X	X
Silver chloride 7783-90-6	X	-	X

U.S. EPA Label Information

Chemical name	FIFRA	FDA
1,2,3-Propanetriol	180.0950	21 CFR 182.90,21 CFR 182.1320
Ammonium chloride	180.0920	21 CFR 184.1138
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega -hydroxy-	180.0940	-

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 Thresholds
Poly(oxy-1,2-ethanediyl), .alpha.-[(1,1,3,3-tetramethylbutyl)phenyl]-.omega -hydroxy- 9036-19-5	Declarable Substance (LR) Prohibited Substance (LR)	0.1 %
Silver chloride 7783-90-6	Declarable Substance (LR)	None reported

NFPA and HMIS Classifications

NFPA	Health hazards - 2	Flammability - 0	Instability - 0	Physical and chemical properties -
HMIS	Health hazards - 2	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)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	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		

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Product Name Ammonium Chloride Reference Electrolyte
Cartridge

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Version 1.5

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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.

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End of Safety Data Sheet