

Issue Date 02-Aug-2018

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Version 1

1. Identification of the Substance / Preparation and of the Company / Undertaking

Product Name: CD-9110
UN/ID No UN1789
Synonyms: Muriatic acid
Recommended Use Industrial, Manufacturing or Laboratory use.

Manufacturer

Anderson Chemical Company, 325 South Davis Avenue, Litchfield, MN 55355 (320-693-2477)

Emergency Telephone:

CHEMTREC (US): 1-800-424-9300

2. Hazards Identification

GHS - Classification

Acute toxicity - Oral	Category 3
Acute toxicity - Inhalation (Gases)	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 1
Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Respiratory sensitization	Category 1A
Specific target organ toxicity (single exposure)	Category 1
Specific target organ toxicity (repeated exposure)	Category 1


Signal Word:
Danger

Hazard Statements:

- Toxic if swallowed
- Fatal if inhaled
- Causes severe skin burns and eye damage
- May cause allergy or asthma symptoms or breathing difficulties if inhaled
- Causes damage to organs
- Causes damage to organs through prolonged or repeated exposure

Physical Hazards

Corrosive to metals	Category 1
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- May be corrosive to metals

Precautionary Statements:

- Do not breathe dust/fume/gas/mist/vapors/spray
- Avoid breathing dust/fume/gas/mist/vapors/spray
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Use only outdoors or in a well-ventilated area
- Avoid release to the environment
- Wear protective gloves/protective clothing/eye protection/face protection

- Wear respiratory protection
- In case of inadequate ventilation wear respiratory protection
- Store in a well-ventilated place. Keep container tightly closed
- Immediately call a POISON CENTER or doctor/physician
- Call a POISON CENTER or doctor/physician
- Get medical advice/attention if you feel unwell
- Rinse mouth
- Immerse in cool water/wrap in wet bandages
- Wash contaminated clothing before reuse
- Absorb spillage to prevent material damage
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position 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: Call a POISON CENTER or doctor/physician
- If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
- Store locked up
- Store in corrosive resistant aluminum container with a resistant inliner
- Dispose of contents/ container to an approved waste disposal plant

3. Composition / Information on Ingredients

Hazardous

Chemical name	CAS No.	Weight-%	EC No
Hydrochloric acid	7647-01-0	9-11	231-595-7

Non-Hazardous

Chemical name	CAS No.	Weight-%	EC No
Water	7732-18-5	Balance	231-791-2

4. First Aid Measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention. May cause allergic respiratory reaction. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical advice/attention.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention. May cause an allergic skin reaction.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical advice/attention. May produce an allergic reaction.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

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

Indication of any immediate medical attention and special treatment needed

Note to physicians

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

5. Fire-fighting Measures**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire

CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media

Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May cause sensitization by inhalation and skin contact.

Explosion Data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

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**Personal precautions, protective equipment and emergency procedures****Personal precautions**

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

Other information

Refer to protective measures listed in Sections 7 and 8.

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

Pick up and transfer to properly labeled containers.

7. Handling and Storage**Precautions for safe handling****Advice on safe handling**

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

Conditions for safe storage, including any incompatibilities**Storage Conditions**

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

8. Exposure Controls / Personal Protection**Control parameters****Exposure Limits**

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrochloric acid 7647-01-0	Ceiling: 2 ppm	5 ppm Ceiling 5 ppm Ceiling 7 mg/m ³ Ceiling 7 mg/m ³ Ceiling	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m ³

Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Face protection shield.
Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.
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.

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

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State:	Liquid	Odor:	Pungent
Appearance:	Aqueous solution	Odor Threshold:	No information available
Color:	Clear Colorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH:	0	
"Salt Out" Point (°F):		No information available
Melting Point/Freezing Point:	-15 °C / 5 °F	
Boiling Point/Boiling Range:	100 °C / 212 °F	
Flash Point:		No information available
Evaporation Rate (BuAc=1):		No information available
Flammability (solid, gas):		No information available
Flammability Limits in Air:		No information available
Upper Flammability Limit:		Lower Flammability Limit:
Vapor Pressure (mm Hg) :		No information available
Vapor density (Air =1)		No information available
Specific Gravity (H ₂ O=1):		No information available
Specific Gravity (2nd value):		No information available
Water Solubility:	100% soluble in water	
Solubility(ies):		No information available
Partition Coefficient (n-octanol/water)		No information available
Autoignition Temperature:		
Decomposition Temperature:		No information available
Kinematic Viscosity:		No information available
Dynamic Viscosity:		No information available
Oxidizing Properties:	No information available	
Explosive Properties:	Not considered to be an explosion hazard	

9.2. Other information

Softening Point:	No information available
Molecular Weight:	36.46
VOC Content(%):	No information available
Liquid Density	1.05
Bulk density	No information available
% Volatiles by Volume @ 21°C (70°F):	100

10. Stability and Reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	Exposure to air or moisture over prolonged periods.
Incompatible Materials	Oxidizing agent. Acids. Bases.
Hazardous decomposition products	Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. Toxicological Information**Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause sensitization in susceptible persons.
Eye contact	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.
Skin contact	Specific test data for the substance or mixture is not available. May cause irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components).
Ingestion	Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. May cause additional affects as listed under "Inhalation".

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Redness. Burning. May cause blindness. Coughing and/ or wheezing. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.
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Numerical measures of toxicity

No information available

Acute Toxicity:

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

ATEmix (oral)	2,380.00 mg/kg
ATEmix (dermal)	50,150.10 mg/kg
ATEmix (inhalation-gas)	7,000.00 ppm
ATEmix (inhalation-dust/mist)	0.50 mg/l

Unknown Acute toxicity 10 % of the mixture consists of ingredient(s) of unknown toxicity

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

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

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

10 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD ₅₀ :	Dermal LD ₅₀ :	LC ₅₀ (Lethal Concentration):
Hydrochloric acid 7647-01-0	238 - 277 mg/kg (Rat)	> 5010 mg/kg (Rabbit)	= 1.68 mg/L (Rat) 1 h
Water 7732-18-5	> 90 mL/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	May cause skin irritation.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.
Respiratory or skin sensitization	May cause sensitization by inhalation.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Hydrochloric acid 7647-01-0	-	3	-	-

Reproductive toxicity	No information available.
STOT - single exposure	Based on the classification criteria of the Globally Harmonized System as adopted in the country or region with which this safety data sheet complies, this product has been determined to cause systemic target organ toxicity from acute exposure. (STOT SE). Causes damage to organs if swallowed.
STOT - repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Target Organ Effects:	Respiratory system, Eyes, Skin.
Other Adverse Effects:	No information available.
Aspiration hazard	No information available.

12. Ecological Information**Ecotoxicity**

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Hydrochloric acid 7647-01-0	-	282: 96 h Gambusia affinis mg/L LC50 static	-	-

Persistence and Degradability:	No information available.
Bioaccumulation:	There is no data for this product.
Other Adverse Effects:	No information available.

13. Disposal Considerations**Waste treatment methods**

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.
US EPA Waste Number	D002.

14. Transport Information**DOT**

Proper shipping name HYDROCHLORIC ACID

Hazard Class 8
UN/ID No UN1789
Packing Group II
Description UN1789, HYDROCHLORIC ACID, 8, PG II



15. Regulatory Information

International Inventories

All of the components in the product are on the following inventory lists: TSCA (United States);, Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), South Korea (KECL);, China (IECSC), ENCS (Japan);, Philippines (PICCS), This product contains a substance not listed on international inventories - it is for research and development use only.

AICS Complies
TSCA Complies
DSL/NDSL Complies
EINECS/ELINCS Complies
ENCS -
IECSC Complies
KECL Complies
PICCS Complies

Chemical name	AICS	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS
Hydrochloric acid	Listed	Listed	Listed	-	Listed	-	(1)-215	Listed	KE-20189	Present
Water	Listed	Listed	Listed	-	Listed	-	-	Listed	KE-35400	Present

Inventory Legend

AICS - Australian Inventory of Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
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

RESTRICTIONS - REACH TITLE VII No information available

US Federal Regulations

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA Extremely Hazardous Substances TPQ
Hydrochloric acid	5000 lb	5000 lb EPCRA RQ (gas only)	500 lb TPQ

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 %
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Hydrochloric acid	1.0
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SARA 311/312 Hazard Categories

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

U.S. State Right-to-Know Regulations**California Proposition 65:**

This product does not contain any Proposition 65 chemicals

16. Other Information**National Fire Protection Association (NFPA) Ratings**

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Disclaimer:

PLEASE BE ADVISED THAT IT IS YOUR RESPONSIBILITY TO INFORM YOUR EMPLOYEES OF THE HAZARDS OF THIS SUBSTANCE, TO ADVISE THEM OF WHAT THESE PROPERTIES MEAN AND BE SURE THEY UNDERSTAND EXPOSURE INFORMATION. THE INFORMATION PROVIDED IN THIS SAFETY DATA SHEET IS CORRECT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF AT THE DATE OF ITS PUBLICATION.

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End of Safety Data Sheet