SAFETY DATA SHEET

Issuing Date 11-May-2015 **Revision Date** 11-May-2015 **Revision Number** 3

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **Muriatic Acid**

Other means of identification

UN-No. UN1789

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Industrial Use Only

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Surpass Chemical Co. Inc.

Supplier Address 1254 Broadway
Albany
NY
12204
US

Supplier Phone Number Phone:518-434-8101
Fax:518-434-2798
Contact Phone518-434-8101

Supplier Email skozak@surpasschemical.com

Emergency telephone number

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Gases)	Category 3

Acute toxicity - Inhalation (Vapors)	Category 3
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

GHS Label elements, including precautionary statements

Emergency Overview

Signal word **Danger**

Hazard Statements
Harmful if swallowed
Toxic if inhaled
Causes severe skin burns and eye damage
May cause respiratory irritation. May cause drowsiness or dizziness

Appearance Colorless to pale yellow **Physical state** Liquid **Odor** Pungent

Precautionary Statements - Prevention
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
Do not breathe dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
Specific treatment (see .? on this label)
Immediately call a POISON CENTER or doctor/physician
Specific treatment (see supplemental first aid instructions on this label)

Eyes
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 doctor/physician

Skin
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
Call a POISON CENTER or doctor/physician if you feel unwell

Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity
0% of the mixture consists of ingredient(s) of unknown toxicity

Other information

No information available

Interactions with Other Chemicals
No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

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Chemical Name	CAS No	Weight-%	Trade Secret
Hydrogen chloride	7647-01-0	60 - 100	*

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures

General Advice Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention/advice.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Seek immediate medical attention/advice.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, (trained personnel should) give oxygen. Avoid direct contact with skin.

Use barrier to give mouth-to-mouth resuscitation.

Ingestion Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Self-protection of the first aider 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.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Notes to Physician 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.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
CO2 (except for Cyanides), dry chemical, dry sand, alcohol-resistant foam. Water spray, fog or alcohol-resistant foam. Move containers from fire area if you can do it without risk. Use water spray or fog; do not use straight streams. Dike fire control water for later disposal; do not scatter the material.

Unsuitable extinguishing media
Note: Most foams will react with the material and release corrosive/toxic gases.

Specific hazards arising from the chemical
Vapors may accumulate in confined areas (basement, tanks, hopper/tank cars, etc.). Substance will react with water (some violently), releasing corrosive and/or toxic gases. Reaction with water may generate much heat which will increase the concentration of fumes in the air. Containers may explode when heated or if contaminated with water.

Uniform Fire Code Corrosive: Other--Liquid
Highly Toxic: Liquid

Hazardous Combustion Products
Carbon oxides.

Explosion Data
Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if you can do it without risk.

Other Information DO NOT GET WATER INSIDE CONTAINERS.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.

Methods and material for containment and cleaning up

Methods for containment A vapor suppressing foam may be used to reduce vapors. Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.

Methods for cleaning up Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

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. Use only with adequate ventilation and in closed systems. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Do not breathe vapor or mist.

Conditions for safe storage, including any incompatibilities

Storage 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.

Incompatible Products Acids. Bases. Oxidizing agent.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH

Hydrogen chloride 7647-01-0	Ceiling: 2 ppm	Ceiling: 5 ppm Ceiling: 7 mg/m³	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits Immediately Dangerous to Life or Health

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection If splashes are likely to occur:. Wear safety glasses with side shields (or goggles). Face protection shield.

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

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.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. Do not breathe vapor or mist.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state	Liquid		
Appearance	Colorless to pale yellow	**Odor**	Pungent
Color	No information available	**Odor Threshold**	No information available

Property	**Values**	**Remarks Method**
pH	1.0	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	108 °C / 226 °F	None known
Flash Point	5001 C / 9034 F	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	No data available	None known
Water Solubility	Completely soluble	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known

Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No data available	
Oxidizing properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability
Stable under recommended storage conditions.
Possibility of Hazardous Reactions
None under normal processing.
Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to avoid
Exposure to air or moisture over prolonged periods. Excessive heat.
Incompatible materials
Acids. Bases. Oxidizing agent.
Hazardous Decomposition Products
Carbon oxides.

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 irritation of respiratory tract. Toxic by inhalation.

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. Prolonged contact may cause redness and irritation.

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. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Hydrogen chloride 7647-01-0	= 700 mg/kg (Rat)	> 5010 mg/kg (Rabbit)	= 3124 ppm (Rat) 1 h

Information on toxicological effects

Symptoms Erythema (skin redness). Burning. May cause blindness. Coughing and/ or wheezing. Difficulty in breathing.

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

Sensitization No information available.

Mutagenic Effects No information available.

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

Chemical Name	ACGIH	IARC	NTP	OSHA
Hydrogen chloride 7647-01-0		Group 3		

IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Chronic Toxicity No known effect based on information supplied. Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Effects from this product caused by acute exposure may cause permanent damage to target organs and/or may cause chronic conditions. Carcinogenic potential is unknown.

Target Organ Effects Respiratory system. Eyes. Skin. Gastrointestinal tract (GI). Systemic Toxicity. Teeth.

Aspiration Hazard No information available.

Numerical measures of toxicity Product Information

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

ATEmix (oral)
700.00 mg/kg
ATEmix (inhalation-gas)
1,562.00 ppm (4 hr)
ATEmix (inhalation-dust/mist)
0.50 mg/l
ATEmix (inhalation-vapor)
3.00 ATEmix

12. ECOLOGICAL INFORMATION

Ecotoxicity
Harmful to aquatic life.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Hydrogen chloride 7647-01-0		96h LC50: = 282 mg/L (Gambusia affinis)		

Persistence and Degradability
No information available.

Bioaccumulation
No information available

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated Packaging Dispose of contents/containers in accordance with local regulations.

US EPA Waste Number D002

California Hazardous Waste Codes 791

14. TRANSPORT INFORMATION

DOT

UN-No. UN1789
Proper Shipping Name HYDROCHLORIC ACID
Hazard Class 8
Packing Group II
Description UN1789, HYDROCHLORIC ACID, 8, II
Emergency Response Guide Number 157

TDG

UN-No. UN1789
Proper Shipping Name HYDROCHLORIC ACID
Hazard Class 8
Packing Group II
Description UN1789, HYDROCHLORIC ACID, 8, II

MEX

UN-No. UN1789

Proper Shipping Name	HYDROCHLORIC ACID
Hazard Class	8
Packing Group	II
Description	UN1789, HYDROCHLORIC ACID, 8, II

ICAO

UN-No.	UN1789
Proper Shipping Name	HYDROCHLORIC ACID
Hazard Class	8
Packing Group	II
Description	UN1789, HYDROCHLORIC ACID, 8, II

IATA

UN-No.	UN1789
Proper Shipping Name	HYDROCHLORIC ACID
Hazard Class	8
Packing Group	II
Description	UN1789, HYDROCHLORIC ACID, 8, II

IMDG/IMO

UN-No.	UN1789
Proper Shipping Name	HYDROCHLORIC ACID
Hazard Class	8
Packing Group	II
EmS-No.	F-A, S-B
Description	UN1789, HYDROCHLORIC ACID, 8, II

RID

UN-No.	UN1789
Proper Shipping Name	HYDROCHLORIC ACID
Hazard Class	8
Packing Group	II
Classification code	C1
Description	UN1789, HYDROCHLORIC ACID, 8, II

ADR

UN-No.	UN1789
Proper Shipping Name	HYDROCHLORIC ACID
Hazard Class	8
Packing Group	II
Classification code	C1
Tunnel restriction code	(E)
Description	UN1789, HYDROCHLORIC ACID, 8, II

ADN

UN-No.	UN1789
Proper Shipping Name	HYDROCHLORIC ACID
Hazard Class	8
Packing Group	II
Classification code	C1
Special Provisions	520
Description	UN1789, HYDROCHLORIC ACID, 8, II
Hazard Labels	8
Limited Quantity	1 L

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies

DSL All components are listed either on the DSL or NDSL.

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

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	CAS No	Weight-%	SARA 313 - Threshold Values %
Hydrogen chloride - 7647-01-0	7647-01-0	60 - 100	1.0

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

CWA (Clean Water Act)

This product contains the following substances which are regulated 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
Hydrogen chloride 7647-01-0	5000 lb			X

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	RQ
Hydrogen chloride 7647-01-0	5000 lb	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

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Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Hydrogen chloride 7647-01-0	X	X	X	X	X

International Regulations

Mexico

National occupational exposure limits

Component	Carcinogen Status	Exposure Limits
Hydrogen chloride 7647-01-0 (60 - 100)		Mexico: Ceiling 5 ppm Mexico: Ceiling 7 mg/m^3

Mexico - Occupational Exposure Limits - Carcinogens

Canada

WHMIS Hazard Class
E - Corrosive material

16. OTHER INFORMATION

NFPA	**Health Hazards** 3	**Flammability** 0	**Instability** 0	**Physical and Chemical Hazards** -
HMIS	**Health Hazards** 3*	**Flammability** 0	**Physical Hazard** 0	**Personal Protection** X

Chronic Hazard Star Legend * = Chronic Health Hazard

Prepared By
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Latham, NY 12110
1-800-572-6501

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Revision Note No information available

Disclaimer
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. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet