MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT CODE	A0432
PRODUCT NAME	HYDROCHLORIC ACID
SUPPLIER	Shanghai M & U International Trade Co., Ltd. Rm 1717, No 598 North NuJiang Road 200333 Shanghai, China +86-21-32515501 32515502 sales@mu-intel.com

FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)

2. HAZARD IDENTIFICATION:

Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Corrosive to metals (Category 1), H290
Skin corrosion (Category 1B), H314
Serious eye damage (Category 1), H318
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
For the full text of the H-Statements mentioned in this Section, see Section 16.
GHS Label elements, including precautionary statements

Pictogram 
Signal word Danger

Hazard statement(s)

H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H335	May cause respiratory irritation

Precautionary statement(s)

P234	Keep only in original container
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P264	Wash skin thoroughly after handling
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310	Immediately call a POISON CENTER or doctor/ physician
P321	Specific treatment (see supplemental first aid instructions on this label)
P363	Wash contaminated clothing before reuse
P390	Absorb spillage to prevent material damage
P403 + P233	Store in a well-ventilated place; Keep container tightly closed
P405	Store locked up
P406	Store in corrosive resistant stainless steel container with a resistant inner liner
P501	Dispose of contents/ container to an approved waste disposal plant

Hazards not otherwise classified (HNOC) or not covered by GHS
None

3. COMPOSITION AND INFORMATION ON INGREDIENTS:

Synonyms	Muriatic acid
Formula	HCl
Molecular Weight	36.46 g/mol
CAS No	7647-01-0
EC No	231-595-7

Hazardous Components

Component	Hydrochloric acid
Classification	Met. Corr. 1; Skin Corr. 1B; Eye Dam. 1; STOT SE 3; H290, H314, H335
Concentration	30-50%

For the full text of the H-Statements mentioned in this Section, see Section 16

4. FIRST-AID GUIDE:

Description of first aid measures
General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician

Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labeling (see section 2) and/or in section 11

Indication of any immediate medical attention and special treatment needed
No data available

5. FIRE-FIGHTING GUIDE:

Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

Special hazards arising from the substance or mixture
Hydrogen chloride gas

Advice for firefighters
Wear self contained breathing apparatus for firefighting if necessary

Further information
No data available

6. ACCIDENTAL RELEASE GUIDE:

Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8

Environmental precautions
Do not let product enter drains

Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal

Reference to other sections
For disposal see section 13

7. H ANDLING AND STORAGE:

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
For precautions see section 2

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage

Specific end use(s)
No other specific uses are stipulated

8. EXPOSURE AND PERSONAL PROTECTION:

Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday

Personal protective equipment
Eye/face protection
Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands

Body Protection
Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)

Control of environmental exposure
Do not let product enter drains

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance	Form: liquid
Odor	no data available
Odor Threshold	no data available
pH	no data available
Melting point/freezing point	no data available
Initial boiling point and boiling range	100 °C (212 °F)
Flash point	not applicable
Evaporation rate	no data available
Flammability (solid, gas)	no data available
Upper/lower flammability or explosive limits	no data available

Vapor pressure	no data available
Vapor density	no data available
Relative density	1.1605 g/cm3
Water solubility	soluble
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	no data available
Oxidizing properties	no data available

Other safety information
No data available

10. STABILITY AND REACTIVITY:

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions

Possibility of hazardous reactions
No data available

Conditions to avoid
No data available

Incompatible materials
Bases, Amines, Alkali metals, Metals, permanganates, e.g. potassium permanganate, Fluorine, metal acetylides, hexalithium disilicide

Hazardous decomposition products
Other decomposition products - no data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION:

Information on toxicological effects
Acute toxicity
Inhalation
No data available

Inhalation
No data available

Dermal
No data available

Skin corrosion/irritation

Skin - rabbit
Result: Causes burns.

Serious eye damage/eye irritation
Eyes - rabbit (Hydrochloric acid)
Result: Corrosive to eyes

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification

IARC
3 - Group 3: Not classifiable as to its carcinogenicity to humans

NTP
No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP

OSHA
No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA

Reproductive toxicity
No data available
No data available

Specific target organ toxicity - single exposure
The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: MW4025000

Burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin

12. ECOLOGICAL INFORMATION:

Toxicity
Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 282 mg/l - 96 h

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects
No data available

13. DISPOSAL RECOMMENDATIONS:

Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber

Contaminated packaging
Dispose of as unused product

14. TRANSPORTATION INFORMATION:

DOT (US)
UN number: 1789 Class: 8 Packing group: II
Proper shipping name: Hydrochloric acid
Reportable Quantity (RQ): 15873 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 1789 Class: 8 Packing group: II EMS-No: F-A, S-B
Proper shipping name: HYDROCHLORIC ACID
Marine pollutant: No

IATA
UN number: 1789 Class: 8 Packing group: II
Proper shipping name: Hydrochloric acid

15. REGULATORY INFORMATION:

REACH No

01-2119484862-27-XXXX

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:
Hydrochloric acid

SARA 311/312 Hazards
Acute Health Hazard

Massachusetts Right to Know Components

	CAS-No	Revision Date
Hydrochloric acid	7647-01-0	1993-04-24

Pennsylvania Right to Know Components

	CAS-No	Revision Date
Water	7732-18-5	1993-04-24
Hydrochloric acid	7647-01-0	

New Jersey Right to Know Components

	CAS-No	Revision Date
Water	7732-18-5	1993-04-24
Hydrochloric acid	7647-01-0	

California Prop 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm

16. OTHER INFORMATION:

Full text of H-Statements referred to under sections 2 and 3

Eye Dam	Serious eye damage
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H335	May cause respiratory irritation
Met. Corr	Corrosive to metals
Skin Corr	Skin corrosion
STOT SE	Specific target organ toxicity - single exposure

HMIS Rating

Health hazard	3
Chronic Health Hazard	
Flammability	0
Physical Hazard	0

NFPA Rating

Health hazard	3
Fire Hazard	0
Reactivity Hazard	0

Further information

The information in this MSDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond M&U's control, it is the responsibility of the user both to determine safe conditions for use of this product and to assume liability for loss, damage, or expense arising out of the products improper use. No warranty expressed or implied regarding the product described herein will be created by or inferred from any statement or omission in the MSDS. Various federal, state, or provincial agencies may have specific regulations concerning the transportation, handling, storage, use, or disposal of this product which may not be reflected in the MSDS. The user should review these regulations to ensure full compliance

Material Safety Data Sheet prepared by: **M & U International LLC**

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