

MATERIAL SAFETY DATA SHEET

Version :02

PRODUCT NAME: HYDROCHLORIC ACID

CAS Number: 7647-01-0

1. IDENTIFICATION:

Product Code : 90421, 90169, 90422, 91656, 94127, 96015, 96020, 96523, 97130, 97601, 97602, 97603, 91576, 90881, 13253, 97130, , 999026

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2. HAZARDS IDENTIFICATION:**Hazard classification****Physical hazards**

Corrosive to Metals : Category 1

Health hazards

Acute toxicity, Oral : Category 4

Skin irritation : Category 1

Eye irritation : Category 1

Skin sensitization : Category 1

Specific target organ toxicity - repeated exposure, Oral : Category 4

Labels elements :

Hazard symbol : 

Signal word : Danger

Hazard statement : May be corrosive to metals.
Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause respiratory irritation.

Precautionary statement

Prevention : Obtain special instructions before use.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.

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Response	: Keep container tightly closed. Ground/ bond container and receiving equipment. Use explosion-proof electrical/ ventilating/ lighting/ equipment. Use only non-sparking tools. Take precautionary measures against static discharge. : IF exposed or concerned: Get medical advice/ attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
Storage	: Store in a dry & well-ventilated place. Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Disposal	: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Other hazards which do not result in GHS classification	: None.

3. COMPOSITION/ INFORMATION ON INGREDIENTS:

Ingredient	CAS Number	Percent	Hazardous
Hydrochloric Acid	7647-01-0	20.0 – 40.0%	Yes

4. FIRST AID MEASURES:

General information	: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
Ingestion	: Call a physician or poison control center immediately. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Inhalation	: Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms persist.
Skin contact	: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Eye contact	: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Most important symptoms/effects, acute and delayed	: Toxic if inhaled. Toxic if swallowed. Toxic in contact with skin. Irritating to eyes, respiratory system and skin.
Indication of immediate medical attention and special treatment needed	: Symptoms may be delayed. Treat symptomatically.

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5. FIRE FIGHTING MEASURES:

General information	:	No data available
Suitable (and unsuitable) extinguishing media	:	
Suitable extinguishing media	:	The product is non-combustible. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	:	Avoid water in straight hose stream; will scatter.
Specific hazards arising from the chemical	:	Fire or excessive heat may produce hazardous decomposition products .
Special protective equipment and precautions for firefighters	:	
Special firefighting procedures	:	Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.
Special protective equipment for fire-fighters	:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. ACCIDENTAL RELEASE MEASURES:

Personal precautions, protective equipment and emergency procedures	:	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid breathing mists or vapors. Keep upwind. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.
Methods and material for containment and cleaning up	:	Neutralize with lime or soda ash. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Dike far ahead of larger spill for later recovery and disposal .
Notification Procedures	:	Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.
Environmental precautions	:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. HANDLING AND STORAGE:

Precautions for safe handling	:	Do not handle until all safety precautions have been read and understood. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/ face protection. Avoid contact with eyes, skin, and clothing. Do not breathe mist or vapor. Use only with adequate ventilation. Wash hands thoroughly after handling.
Conditions for safe storage, including any incompatibilities	:	Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a dry, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

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8. EXPOSURE CONTROLS PERSONAL PROTECTION:

Control parameters

Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
Hydrochloric Acid	Ceiling	2 ppm	US. ACGIH Threshold Limit Values (2011)
	Ceil_Time	5 ppm 7 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	Ceiling	5 ppm 7 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	Ceiling	5 ppm 7 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

Appropriate engineering controls

: No data available

Individual protection measures, such as personal protective equipment

General information

: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

Eye/face protection

: Wear safety glasses with side shields (or goggles).

Hand protection

: Chemical resistant gloves.

Other

: Wear suitable protective clothing.

Respiratory protection

: In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapor cartridge.

Hygiene measures

: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower. Avoid contact with eyes, skin, and clothing.

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9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance	: Clear, colorless liquid
Odor	: Pungent
Solubility	: Miscible in water.
Formula	: HCl
Molecular Weight	: 36.46 g/mol
Specific Gravity	: 1.18 g/cm ³ at 25°C
pH	: Acidic
Boiling Point	: 48°C
Melting Point	: -35°C
Vapor Density (Air=1)	: No data available
Vapor Pressure (mm Hg)	: 14.1 kPa

10. STABILITY AND REACTIVITY:

Reactivity	: Reacts violently with strong alkaline substances.
Chemical stability	: Material is stable under ambient conditions..
Possibility of hazardous reactions	: Hazardous polymerization does not occur.
Conditions to avoid	: Avoid contact with strong reducing agents. Strong oxidizing agents. Contact with alkalis.
Incompatible materials	: Acids. Amines. Alkalies. Metals. Reducing agents. Oxidizing agents
Hazardous decomposition products	: In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION:**Information on likely routes of exposure**

Ingestion	: Harmful if swallowed
Inhalation	: Causes severe burns.
Skin contact	: Causes severe skin burns.
Eye contact	: Causes serious eye damage.

Information on toxicological effects**Acute toxicity (list all possible routes of exposure)**

Oral Product	: ATEmix (Rat): 581 mg/kg
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Dermal Product	:	No data available.
Inhalation Product	:	No data available.
Repeated dose toxicity Product	:	No data available.
Skin corrosion/irritation Product	:	Causes severe skin burns.
Serious eye damage/eye irritation Product	:	Causes serious eye damage.
Respiratory or skin sensitization Product	:	Not a skin sensitizer.
Carcinogenicity Product	:	This substance has no evidence of carcinogenic properties
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans	:	No carcinogenic components identified.
US. National Toxicology Program (NTP) Report on Carcinogens	:	No carcinogenic components identified.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	:	No carcinogenic components identified.
Germ cell mutagenicity	:	
In vitro Product	:	No data available.
Reproductive toxicity Product	:	No components toxic to reproduction.
Specific target organ toxicity - single exposure Product	:	Respiratory tract irritation.
Specific target organ toxicity - repeated exposure Product	:	None known.
Aspiration hazard Product	:	Not classified.
Other effects	:	None known.

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12. ECOLOGICAL INFORMATION:**Ecotoxicity****Acute hazards to the aquatic environment****Fish Product** : No data available.**Aquatic invertebrates Product** : No data available.**Chronic hazards to the aquatic environment****Fish Product** : No data available.**Aquatic invertebrates Product** : No data available.**Toxicity to Aquatic Plants Product:** : No data available.**Persistence and degradability****Biodegradation Product** : Expected to be readily biodegradable.**BOD/COD ratio Product** : No data available.**Bioaccumulative potential****Bioconcentration factor (BCF) Product** : No data available on bioaccumulation.**Partition coefficient n-octanol / water (log Kow) Product** : No data available.**Mobility in soil** : The product is partly soluble in water. May spread in the aquatic environment.**Other adverse effects** : Large amounts of the product may affect the acidity (pH-factor) in water with possible risk of harmful effects to aquatic organisms .**13. DISPOSAL CONSIDERATION:****Disposal instructions** : Discharge, treatment, or disposal may be subject to national, state, or local laws. Disposal recommendations are based on uncontaminated material.**Contaminated packaging** : Since emptied containers retain product residue, follow label warnings even after container is emptied.**14. TRANSPORT INFORMATION:**

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	UN 1789	Hydrochloric acid	8	II	No
IMDG	UN 1789	Hydrochloric acid	8	II	No
IATA	UN 1789	Hydrochloric acid	8	II	No

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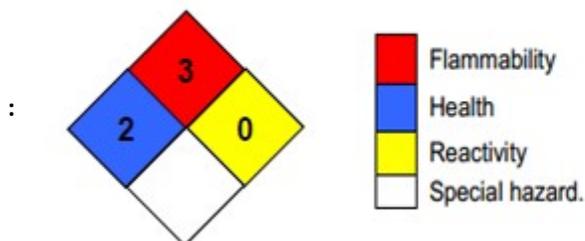
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15. REGULATORY INFORMATION:

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.
Safety, health and environmental regulations/legislation specific for the substance or mixture
No Data Available.

16. OTHER INFORMATION:

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

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