

Material Safety Data Sheet (MSDS)

Section 1: Chemical Product and Company Identification	
Product Name	Hydrogen Chloride 33%
CAS Number	7647-01-0
Chemical Formula	HCl
Company Name	CAMACHEM (Part of CAMAL Group) 3F Jinlong East Beijing Station Road Chaoyang District, Beijing, China
Contact	sales@camachem.com
Company Website	www.camachem.com
Section 2: Composition and Information on Ingredients	
Name	Hydrogen Chloride
CAS #	7647-01-0
% by Weight	>33%
Section 3: Hazards Identification	
Prevention:	Do not eat, drink or smoke when using this product. Wash hands and face thoroughly after handling. Avoid breathing fume, mist, vapors or spray. Use only outdoors or in a well-ventilated area. Do not breathe dusts or mists. Wear protective gloves, protective clothing, eye protection and face protection. Wear eye protection. Wear face protection (full length face shield). Avoid breathing dusts or mists. In case of inadequate ventilation wear respiratory protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe fume, mist, vapors or spray. Keep away from heat, sparks, open flames or other hot surfaces. - No smoking. Keep container tightly closed. Ground or bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting, and equipment. Use only non-sparking tools. Take precautionary measures

**CAMACHEM (Part of CAMAL Group), 3F Jinlong East Beijing Station Road
Chaoyang District, Beijing, China**
www.camachem.com

	against static discharge. Wear protective gloves, eye protection and face protection.
Response:	If swallowed: Immediately call a poison center or doctor. Rinse mouth. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a poison center or doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor. If exposed: Call a poison center or doctor. Get medical advice or attention if you feel unwell. In case of fire: Use dry chemical, CO ₂ , water spray or alcohol-resistant foam to extinguish.
Storage:	Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool.
Disposal:	Dispose of contents and container in accordance with US EPA guidelines for the classification and determination of hazardous waste listed in 40 CFR 261.3.
Hazards not otherwise classified:	May be harmful if swallowed and enters airways.
Section 4: First Aid Measures	
Inhalation:	May cause coughing, difficult breathing and nausea. Immediately call a poison center or doctor. Effects of exposure (inhalation) to substance may be delayed. Inhalation of vapors or contact with substance will result in contamination and potential harmful effects. Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
Skin contact:	For severe burns, immediate medical attention is required. Immediately call a poison center or doctor. Effects of exposure (skin contact) to substance may be delayed. Remove and wash contaminated clothing before re-use. Remove and isolate

	contaminated clothing and shoes. In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves
Eye contact:	IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Eye contact with vapors or substance may cause severe injury, burns, or death. Call emergency medical service. Move victim to fresh air. Check for and remove any contact lenses. Keep victim warm and quiet. Treat symptomatically and supportively. Effects of exposure to substance may be delayed. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
Ingestion:	Harmful if swallowed. Do not induce vomiting without medical advice. Effects of exposure (ingestion) to substance may be delayed. Call a physician or Poison Control Center immediately. Do not use mouth-to-mouth method if victim ingested the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Loosen tight clothing such as a collar, tie, belt or waistband. If a person vomits place them in the recovery position so that vomit will not reenter the mouth and throat. Rinse mouth. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
Symptoms/effects:	
Acute:	Dizziness. Pain. Redness. Drowsiness.
Delayed:	May have effects on the respiratory tract.
Section 5: Fire and Explosion Data	
Immediate medical attention:	WARNING: It might be hazardous to the person providing aid to give mouth-to-mouth respiration, because the inhaled material is harmful. WARNING: It might be hazardous to the person providing aid to give mouth-to-mouth respiration, because the inhaled material is corrosive. CAUTION: Victim may be a source of contamination. For severe burns, immediate medical attention is required. If breathing has stopped, perform artificial respiration. Use first aid treatment according to the nature of the injury.

	Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.
Suitable extinguishing media:	Dry chemical, CO ₂ or water spray. Consult with local fire authorities before attempting large scale fire fighting operations.
Specific hazards arising from the chemical Hazardous combustion products:	These products include: Halogenated compounds.
Other specific hazards:	WARNING: Highly toxic HCl gas is produced during combustion.
Special precautions for fire-fighters:	Use water spray or fog; do not use straight streams. Dike fire-control water for later disposal; do not scatter the material. CAUTION: All these products have a very low flash point: Use of water spray when fighting fire may be inefficient. Do not use straight streams. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Move containers from fire area if you can do it without risk.
Special protective equipment for fire-fighters:	Wear positive pressure self-contained breathing apparatus (SCBA). Structural fire fighters' protective clothing provides limited protection in fire situations ONLY; it may not be effective in spill situations. Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
Section 6: Accidental Release Measures	
Personal precautions:	Avoid contact with skin, eyes, and clothing. Keep people away from and upwind of spill/leak. Use sparkproof tools and explosion-proof equipment. Remove all sources of ignition. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (Section 8). Warn unnecessary personnel to move away. Stop leak if you can do it without risk. Ensure adequate ventilation. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
Personal protective equipment:	Wear eye protection (splash goggles) and face protection (full length face shield). Wear protective clothing (chemical resistant suit and chemical resistant boots). Vapor respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear protective gloves (nitrile).
Emergency procedures:	Isolate area until gas has dispersed. Do not clean-up or dispose except under supervision of a specialist. In case of a spill and/or a leak, always shut off any sources of ignition, ventilate the area,

	and exercise caution. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Warn personnel to move away. Prevent entry into sewers, basements or confined areas; dike if needed
Methods and materials for containment and cleaning up:	ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). All equipment used when handling the product must be grounded. Stop leak if without risk. Ventilate the area. Absorb with an inert material and put the spilled material in an appropriate waste disposal container. Use clean non-sparking tools to collect absorbed material. Dike far ahead of spill; use dry sand to contain the flow of material.
Environmental precautions:	Keep away from living quarters. Environmental hazard. Do not let product enter drains. Prevent further leakage or spillage if safe to do so. Water runoff can cause environmental damage. Prevent entry into sewers, basements or confined areas; dike if needed.
Section 7: Handling and Storage	
Precautions for safe handling:	Do NOT breathe gas, fumes, vapor, or spray. Manipulate under an adequate fume hood. Do not ingest. Avoid contact with skin and eyes. Avoid contact - obtain special instructions before use. Avoid prolonged or repeated exposure. Normal measures for preventive fire protection. Keep away from heat and sources of ignition. Use explosion-proof equipment. Use only non-sparking hand tool when handling this product. Ground all equipment containing material. Take measures to prevent build up of electrostatic charge. Good general ventilation should be sufficient to control airborne levels. Keep container dry. Handle and open container with care. Wear suitable protective clothing, gloves and eye/face protection. When using do not eat, drink, or smoke. Keep away from sources of ignition.
Conditions for safe storage:	Store locked up. Keep containers tightly closed in a cool, well-ventilated place. Keep away from sources of ignition. Store and use away from heat, sparks, open flame, or any other ignition source. Keep away from incompatibles. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Avoid prolonged storage periods. Store under inert gas (e.g. Argon). Hygroscopic

	material, store in a tightly sealed container. Store in refrigerator.
Storage incompatibilities:	Store away from oxidizing agents.
Section 8: Exposure Controls/Personal Protection	
Exposure limits:	No data available.
Appropriate engineering controls:	Handle only in a fully enclosed system and equipment. Good general ventilation should be sufficient to control airborne levels. Ventilation is normally required when handling or using this product. Eyewash fountains should be provided in areas where there is any possibility that workers could be exposed to the substance. Follow safe industrial engineering/laboratory practices when handling any chemical.
Hand protection:	Wear protective gloves.
Eye/face protection:	Splash goggles.
Skin and body Protection:	Wear protective clothing (chemical resistant suit and chemical resistant boots).
Respiratory protection:	Vapor respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent.
Section 9: Physical and Chemical Properties	
Physical state and appearance:	Clear liquid
Odour:	Characteristic
Color:	Colorless - Almost colorless
PH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash point:	~40°C (~40°F)
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:	0.73
Water solubility:	No data available.
Partition coefficient:	No data available.
Auto-ignition temperature:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.
Section 10: Stability and Reactivity Data	
Reactivity:	No data available.

Stability:	Heat sensitive.
Possibility of hazardous reactions:	In use, may form flammable/explosive vapor-air mixture.
Conditions to avoid:	Heat sensitive.
Incompatibility with various substances:	Oxidizing agents
Hazardous decomposition products:	No data available.
Section 11: Toxicological Information	
Acute toxicity:	No data available.
Toxicity to Animals:	No data available.
Serious eye damage/eye irritation:	No data available.
Other Toxic Effects on Humans:	No data available.
Respiratory or skin sensitisation:	No data available.
Carcinogenicity:	No data available.
Reproductive toxicity:	No data available.
Specific target organ toxicity - single exposure:	No data available.
Specific target organ toxicity - repeated exposure:	No data available.
Aspiration hazard:	No data available.
Routes of Exposure:	Inhalation, Eye contact, Ingestion, Skin contact.
Symptoms related to exposure:	Overexposure may result in serious illness or death. Skin contact may produce burns. Skin contact may result in inflammation; characterized by itching, scaling, reddening, or occasionally blistering. Eye contact can result in corneal damage or blindness. Inhalation causes irritation of the lungs and respiratory system.
Potential Health Effects:	Inhalation causes irritation of the lungs and respiratory system.
Aspiration hazard:	May be harmful if swallowed and enters airways.
Target organ(s):	May cause respiratory irritation. May cause drowsiness or dizziness. Causes damage to organs: Respiratory System Teeth through prolonged or repeated exposure.
Section 12: Ecological Information	
Toxicity:	No data available.
Persistence and degradability:	No data available.
Bioaccumulative potential:	No data available.
Mobility in soil:	No data available.
Results of PBT and vPvB assessment:	No data available.
Other adverse effects:	No data available.
Section 13: Disposal Considerations	

Product:	Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local rules and regulations. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. This section is intended to provide assistance but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environment, drains, water ways, or the soil.
Contaminated packaging:	Dispose of as unused product. Do not re-use empty containers.
Other considerations:	Observe all federal, state and local regulations when disposing of the substance.
Section 14: Transport Information	
DOT (US):	UN number: UN2924 Proper Shipping Name: Flammable liquids, corrosive, n.o.s. Class or Division: 3 Flammable liquid Subrisk(s): 8 Corrosive material Packing Group: I
IMDG:	UN number: UN2924 Proper Shipping Name: Flammable liquids, corrosive, n.o.s. Class or Division: 3 Flammable liquid Subrisk(s): 8 Corrosive material Packing Group: I
IATA:	UN number: UN2924 Proper Shipping Name: Flammable liquids, corrosive, n.o.s. Class or Division: 3 Flammable liquid Subrisk(s): 8 Corrosive material Packing Group: I
EmS number:	F-E, S-C
Section 15: Other Regulatory Information	
CERCLA Hazardous substance and Reportable Quantity:	SARA 313: Listed SARA 302: Listed
State Right-to-Know:	Massachusetts Listed New Jersey Not Listed



Contact: sales@camachem.com

	Pennsylvania Listed California Proposition 65: Not Listed
International Inventories:	WHMIS hazard class: E: Corrosive material. B2: Flammable Liquid. D2A: Materials causing other toxic effects. (Very Toxic) EC-No: 231-595-7
Section 16: Other Information	
References:	None.
Other Special Considerations:	None.
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