Gujarat Alkalies and Chemicals Ltd.
Vadodara

SECTION 1: Product and Company Identification		
Name	**HYDROCHLORIC ACID**	
Company	M/s Gujarat Alkalies and Chemicals Limited, P.O. Petrochemicals, Dist.: - Vadodara, Gujarat (India), Pin Code: 391346	
Synonyms	Muriatic Acid, Hydrogen chloride, Chlorohydric acid; Hydrogen chloride in aqueous solution.	
Emergency Contact Details	Phone no.	09979897101, 09879604102
	E-mail	headmarketing@gacl.co.in ccr@gacl.co.in

SECTION 2: Hazards Identification	
Emergency Overview	
	Causes eye and skin burns. Causes digestive and respiratory tract burns. May be fatal if inhaled or swallowed. Repeated or prolonged exposure may cause erosion of exposed teeth. Corrosive to metal. **Target Organs:** Respiratory system, gastrointestinal system, teeth, eyes, skin.
Potential Health Effects	
Inhalation	May be fatal if inhaled. May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. Causes chemical burns to the respiratory tract. Causes corrosive action on the mucous membranes.
Skin	Contact with liquid is corrosive and causes severe burns and ulceration. The severity of injury depends on the concentration of the solution and the duration of exposure.
Eyes	May cause irreversible eye injury. Vapour or mist may cause irritation and severe burns. Contact with liquid is corrosive to the eyes and causes severe burns.
Ingestion	Causes severe digestive tract burns with abdominal pain, vomiting, and possible death. May cause corrosion and permanent tissue destruction of the esophagus and digestive tract.
Disposal	Dispose of contents/container to an approved waste disposal plant

SECTION 3: Composition/information on ingredients

Component	CAS-No.	EC-No.	Weight %
Hydrogen chloride	7647-01-0	231-595-7	~30 - 32%
Water	7732-18-5	215-185-5	~68-70%

SECTION 4: First Aid Measures	
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. 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. Immediate medical attention is required
Skin	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Eyes	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.
Ingestion	If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.
Most important symptoms/effects	Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.
Notes to Physician	Treat symptomatically.

SECTION 5: Fire Fighting Measures			
Suitable Extinguishing Media	Substance is non-flammable; use agent most appropriate to extinguish surrounding fire.		
Flash Point	Not applicable	**Explosion Limits**	
Auto ignition Temperature	No data available	**Upper**	No data available
		Lower	No data available
Hazardous Combustion Products	Hydrogen chloride gas		
Specific Hazards Arising from the Chemical	Corrosive Material. Causes burns by all exposure routes. Thermal decomposition can lead to release of irritating gases and vapours.		
NFPA: Health: 3 Flammability: 0 Reactivity: 0 Special hazards: ACID			

SECTION 6: Accidental Release Measures	
Personal Precautions	Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Do not get in eyes, on skin, or on clothing.
Environmental precautions	Prevent waste from contaminating the surrounding environment. Prevent soil and water pollution. Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.
Methods and materials for containment and cleaning up	Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

SECTION 7: Handling and Storage	
Handling	Do not breathe gas/vapour. Avoid all contact with skin, eyes, or clothing. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Storage	Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Contents under pressure. Storage class: Liquid

SECTION 8: Exposure Controls/Personal Protection		
Exposure Guidelines:		
Component	**OSHA PEL**	**ACGIH TWA**
Hydrochloric acid	Ceiling: 5 ppm	Ceiling: 2 ppm

Engineering Measures	Ensure that eyewash stations and safety showers are close to the workstation location. Local exhaust ventilation and fumes blower provided to control acid fumes exposure.
Personal Protective Equipment	
Eye/face Protection	Wear chemical splash goggles and face shield.
Skin and 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 respirator cartridges as a backup to enginee protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards

SECTION 9: Physical and Chemical Properties			
Appearance	Liquid	**Water solubility**	Soluble in water
Odour	Pungent, Irritating (Strong)	**Auto-ignition temperature**	Not available
pH	< 1	**Viscosity**	1.8 mPa.s @ 15°C
Melting point/freezing point	-35 °C	**Flammability (solid, gas)**	No data available
Initial boiling point and boiling range	57 °C @ 760 mmHg	**Decomposition temperature**	No data available
Vapour pressure	84 mm Hg @ 20 ^{0}C	**Relative density**	1.2 g/cm^{3} @ 25 °C
Vapour density	1.27 (Air = 1)	**Oxidizing properties**	The substance is not classified as oxidizing.

SECTION 10: Stability and Reactivity	
Reactive Hazard	None known, based on information available
Stability	Stable under recommended storage conditions
Conditions to Avoid	Incompatible products. Excess heat.
Incompatible Materials	Metals, Strong oxidizing agents, Bases, sodium hypochlorite, Amines, Fluorine, Cyanides, Alkaline.
Hazardous Decomposition Products	Hydrogen chloride gas
Hazardous Polymerization	Hazardous polymerization does not occur.

Hazardous Reactions	Contact with metals may evolve flammable hydrogen gas.
SECTION 11: Toxicological Information	
Acute toxicity	LD_{50} 238 - 277 mg/kg (Rat)
Carcinogenicity	ACGIH - Not listed, OSHA - Not listed
SECTION 12: Ecological Information	
Eco toxicity	**Freshwater Fish-**282 mg/L LC_{50} 96 h Gambusia affinis, mg/L LC_{50} 48 h Leucscus idus **Water Flea-**56mg/L EC_{50} 72h Daphni
Other	Very toxic to aquatic life.
SECTION 13: Disposal Considerations	
Waste treatment methods	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.
Product	Burn in a chemical incinerator equipped with an afterburner and scrubber highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal facility.
Contaminated packaging	Dispose of as unused product.
SECTION 14: Transport Information	
UN number	1789
UN proper shipping name	HYDROCHLORIC ACID
Transport hazard class	Class 8: Corrosive material
Packaging group	II
Environmental hazards	No
SECTION 15: Regulatory Information	
Safety, health and environmental regulations/legislation specific for the substance or mixture This safety datasheet complies with the requirements of Regulation.	
SECTION 16: Other Information	
Disclaimer The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.	