


 al kout industrial projects الكوت للمشاريع الصناعية	<b>AL KOUT INDUSTRIAL PROJECTS</b>	Document No:	C-SM-XX-D-007
		Issue No:	1
	Rev no:	4	
	<b>Safety Data Sheet</b> <b>HYDROCHLORIC ACID-32%</b>	Date revision	21.11.2018
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1.0 Chemical Identity		
1.1	Product Name	Hydrochloric Acid
	Synonyms	Muriatic Acid; Chlorohydric Acid; Hydrogen Chloride in aqueous solution
	Formula	HCl
1.2	Recommended Use and Restrictions	
	Use of substance	For laboratory and manufacturing use
1.3	Company Information	
		<b>Name:</b> Al Kout Industrial Projects , Kuwait <b>Plant:</b> Salt & Chlorine Plant, Shuaiba, Kuwait <b>Company's Post Box No.:</b> 10277, Shuaiba-65453, Kuwait <b>Tel No.:</b> 00-(965)-22283726 Intercom: 3726, 3725 <b>Fax No.:</b> 00-(965)- 22284043 <b>Company's Emergency Phone No:</b> 00-(965)-, 23261029, 97216020, 99794511
1.4	Emergency Telephone Number	00-(965)-, 23261029, 97216020
2.0 Hazards Identification		
2.1	Classification of the Substance or Mixture	
<b>GHS US Classification</b>		
	Skin corrosion / irritation	H315 Causes Skin Irritation
	Serious eye damage / eye irritation Category 2A Full text of H statements : see section 16	H319 Causes Serious eye irritation
2.2	Label Elements	
GHS US Labeling		
Hazard Pictograms (GHS – US) :		
 		
Single Word (GHS-US) :Warning Hazard Statements (GHS-US) :H315 – Causes Skin Irritation :H319 – Cause Serious eye irritation Precautionary Statements (GHS – US) :P264 - Wash exposed skin thoroughly after handling P280 - Wear protective gloves, eye protection P302+P352 - IF ON SKIN: Wash with plenty of soap and water P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. P332+P313 - If skin irritation occurs: Get medical advice/attention P337+P313 - If eye irritation persists: Get medical advice/attention P362 - Take off contaminated clothing and wash it before reuse		
2.3	Other Hazards	
Other hazards not contributing to the classification : None		
2.4	Unknown acute toxicity (GHS US)	
Not Applicable		

3.0 Composition/ Information on ingredients		
3.1	Substances	
Not Applicable		
3.2	Mixtures	
	Finished product specification	Hydrochloric Acid 32%
	Chemical Analysis	
	PARAMETERS	Specification

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Appearance	Colourless
Specific Gravity	1.156 --- 1.160
Temperature C	22 --26
Hydrochloric Acid (at above temp) wt %	32.0 --- 33.0
Hydrochloric Acid (at above temp) G / L	369 -- 382
Free chlorine (Cl <sub>2</sub> ) ppm , max	2.0
Iron contents (Fe <sup>3+</sup> ) ppm , max	1.0
Details of ingredients that could be released from the product in Excess of the PEL value	
Fumes of HCl gas evolves from HCl acid- evolved gas concentration depending on quantity of acid exposed to air.	

#### 4.0 First Aid Measures


4.1	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. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
4/2	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. In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse
4.3	Eyes	May cause irreversible eye injury. Vapor or mist may cause irritation and severe burns. Contact with liquid is corrosive to the eyes and causes severe burns. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.
4.4	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. 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.

#### 5.0 Fire Fighting Measures

5.1	Suitable Extinguishing Media	Foam. Dry powder. Carbon dioxide. Water spray. Sand
	Unsuitable Extinguishing Media	Do not use a heavy water stream
5.2	Specific hazards arising from the chemical	Fire Hazard : Not Flammable Explosion hazard : Not applicable
5.3	Special protective equipment and precaution for fire – fighters	Use Water spray or Fog for cooling containers. Exercise caution when fighting any chemical fire . Prevent fire –fighting water from entraining environment .

#### 6.0 Accidental Release Measures

6.1	General Information	Use proper personal protective equipment.  Eyes: Wear chemical goggles and face shield. Skin: Wear appropriate gloves to prevent skin exposure. Clothing: Wear appropriate protective clothing to prevent skin exposure. Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must
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		be followed whenever workplace conditions warrant a respirator's use.
6.2	Spills/Leaks	Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Isolate area and deny entry. Provide ventilation. Spill may be carefully neutralized with lime (calcium oxide, CaO). Do not use combustible materials, such as saw dust


### 7.0 Handling and Storage

7.1	Handling	Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Contents may develop pressure upon prolonged storage. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Discard contaminated shoes. Keep away from strong bases and metals. Use caution when opening. Do not use with metal spatula or other metal items. Do not breathe vapor or mist. Use only with adequate ventilation or respiratory protection
7.2	Storage	Store in a cool, dry, well-ventilated area away from incompatible substances. Corrosives area. Do not store in metal containers. Store away from alkalis. Separate from oxidizing materials

### 8.0 Exposure Controls/Personal Protection

8.1	<b>Airborne Exposure Limits:</b>	For Hydrochloric acid: - OSHA Permissible Exposure Limit (PEL): 5 ppm (Ceiling) - ACGIH Threshold Limit Value (TLV): 2 ppm (Ceiling), A4 Not classifiable as a human carcinogen
8.2	<b>Ventilation System:</b>	A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.
8.3	<b>Personal Respirators (NIOSH Approved):</b>	If the exposure limit is exceeded, a full facepiece respirator with an acid gas cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. <b>WARNING:</b> Air purifying respirators do not protect workers in oxygen-deficient atmospheres. 
8.4	<b>Skin Protection:</b>	Rubber or neoprene gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.
8.5	<b>Eye Protection:</b>	Use chemical safety goggles and/or a full face shield where splashing possible. Maintain eye wash fountain and quick-drench facilities in work area.

### 9.0 Physical and Chemical Properties

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9.1	Appearance/ Colour	Colorless to slight yellow clear liquid
9.2	Odour	Strong, pungent
9.3	Molecular Weight	36.5
9.4	Melting Point	Not applicable
9.5	Boiling Point	760C @ 101kPa
9.6	Specific gravity	1.16 @ 20 0C (Water =1)
9.7	Vapour Pressure @ 21.1 0	3.23 psi
9.8	Solubility (water)	Soluble
9.9	Vapor density	1.3 (Air=1)


10.0 Stability and Reactivity		
10.1	Chemical Stability	Stable under normal temperatures and pressures
10.2	Incompatibilities with other metals	Metals, strong oxidizing agents, strong reducing agents, bases, acetic anhydride, alcohols, amines, sulfuric acid, vinyl acetate, epoxides (e.g. butyl glycidyl ether), chlorosulfonic acid, carbides, beta-propiolactone, ethyleneimine, propylene oxide, lithium silicides, 2-aminoethanol, 1,1-difluoroethylene, magnesium boride, mercuric sulfate, aldehydes, cyanides, sulfides, phosphides.
10.3	Hazardous Decomposition Products	Hydrogen chloride, chlorine, hydrogen gas

11.0 Toxicological Information	
11.1	Extremely corrosive. Inhalation of vapour can cause serious injury. Ingestion may be fatal. Liquid can cause severe damage to skin and eyes. TLV 5 ppm.
11.2	Toxicity data ORL-RBT LD50 900 mg kg-1 IPR-MUS LD50 40 mg kg-1 IHL-RAT LC50 3124 ppm/1h. IHL-HMN LCLO 1300 ppm 30min

12.0 Ecological Information	
12.1	Environmental Fate: When released into the soil, this material is not expected to biodegrade. When released into the soil, this material may leach into groundwater.
12.2	Environmental Toxicity: This material is expected to be toxic to aquatic life.

13.0 Disposal Considerations	
13.1	Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a KEPA approved waste facility. Processing, use or contamination of this product may change the waste management options.. Dispose of container and unused contents in accordance with KEPA requirements, if any.

14.0 Transport Information		
14.1	UN No	1789
14.2	IMCO Class	8
14.3	Packaging group	II
14.4	ADR/RID classification code	C1
14.5	ADR/RID Hazard number	80

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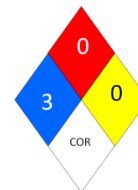
15.0 Regulatory Information		
15.1	SARA 302/304/311/312 Extremely Hazardous Substances	Hydrochloric acid
15.2	SARA 313 Toxic Chemical Notification and release reporting	Hydrochloric acid
15.3	CERCLA Hazardous Substances	Hydrochloric acid (5000 lbs – RQ)
15.4	OSHA- Hazardous by definition of Hazard Communication Standard	FR 1910:1200

16.0 Other Information		
16.1	Packing	Jerry cans, Industrial Bulk Containers (IBC's) and Tankers
16.2	Disclaimer	Information contained in this material data sheet is believed to be reliable but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is upto the manufacturer/seller to ensure that the information contained in the material safety data sheet is relevant to the product manufactured / handled or sold by him as the case may be. The AIP Co. makes no warranties expressed or implied in respect of the adequacy of this document for any particular purpose.

Full text of H-Phrases

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Cause skin irritation
H318	Cause serious eye damage
H319	Cause serious eye irritation
H335	May cause respiratory irritation
H402	Harmful to aquatic life

NFPA health hazard	: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.
NFPA fire hazard	: 0 - Materials that will not burn under typical dire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA reactivity temperatures and pressures.	: 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.
Hazard Rating	
Health medical treatment is given	: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability	: 0 Minimal Hazard - Materials that will not burn
Physical conditions, and will NOT	: 0 Minimal Hazard - Materials that are normally stable, even under fire
Personal protection	: H H - Splash goggles, Gloves, Synthetic apron, Vapor respirator



*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*