	AL Saidain Chemical Treatment of Environment Factory - ACTEF	
	TECHNICAL DATA SHEET	
		Issue Date: 27/12/2022

PRODUCT

ACTEF HYDROCHLORIC ACID

INDUSTRIAL PRODUCT

CHEMICAL FORMULA

HCl+H2O

OTHER NAME OF MATERIAL

Hydrochloric acid, according to ADR/RID: chlorine hydride acid (hydrochloric acid)

MOLECULAR MASS

36.5

HAZARD IDENTIFICATION NUMBER

80

UN NUMBER

1789

APPEARANCE

Colourless or yellow air-fuming solution with pungent odour

SPECIFICATIONS

Tested properties		Synthetic grade	Technical grade	Industrial grade	Test method
Hydrochloric acid (HCl) content	min.	33.0 m/m %	31.0 m/m %	31.0 m/m %	MSZ 23118:1985 (ISO 904: 1976)
Ignition residue in form of sulphate	max.	0.06 m/m %	0.06 m/m %	0.06 m/m %	MSZ 901:1986 (ISO 907:1976)
Oxidising or reducing substance content in form of chlorine (Cl) and sulphuric dioxide (SO_2)	max.	0.01 m/m %	0.01 m/m %	0.01 m/m %	MSZ 901:1986 (ISO 908:1980)
Iron (Fe) content	max.	0.002 m/m %	0.003 m/m %	0.003 m/m %	MFF-232* MSZ 901:1986 (ISO/R 909:1968)
Organic pollution	max.	-	0.0001 m/m %	0.01 m/m %	MFF-226*

APPLICATION AREAS

The largest hydrochloric acid consumer is the chemical industry. Its other application areas are the pharmaceutical, food, metal and water treatment industries. It is also used in oil and gas industry as well as ore and mineral processing.

HAZARD CLASSIFICATION

According to ADR and RID hydrochloric acid solution is classified in Class 8 (corrosive substances) on the basis of its major hazardous properties.
Any further measures to be taken during transportation can be determined on the basis of this classification.

PACKAGING AND TRANSPORT	30 L, 1 Cubic Meter and road Tanker Hydrochloric acid solution can be loaded and delivered in rubber-lined tankers and plastic tanks. It shall be transported in packaging devices in compliance with ADR and RID regulations by both road and rail.
STORAGE	It can be stored in rubber or plastic lined steel or plastic containers. Contact with substances (e.g. metals, oxidizing agents) reacting with hydrochloric acid that may result in toxic, inflammable or other hazardous substances, should be avoided. It should be stored in a well-ventilated place. No expiry date in properly closed container or storage tank.
SAFETY MEASURES	Its concentrated aqueous solution in contact with the skin is extremely corrosive and the inhalation of its vapour damages the respiratory tracts and lung tissues. It is obligatory to wear suitable protective clothing, rubber gloves, rubber boots and safety goggles when handling hydrochloric acid. For more information, please see the material Safety Data Sheet.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Hydrochloric acid

Product Number : H1758

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Manufacture of substances, Chemical industry, the pharmaceutical, food, metal and water treatment industries.
It is also used in oil and gas industry as well as ore and mineral processing.

1.3 Details of the supplier of the safety data sheet

Company : **Al Saidain Chemical Treatment Of Environment Factory (ACTEF)**
P.O Box 23456 3rd Industrial City, Jeddah, KSA

Telephone : +966 (12) 6790317
E-mail address : info@actefa.com

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
Corrosive to Metals (Category 1), H290
Skin corrosion (Sub-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.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008
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 packaging.
P261	Avoid breathing mist or vapors.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

Reduced Labeling (<= 125 ml)

Pictogram



Signal Word	Danger
Hazard statement(s)	
H314	Causes severe skin burns and eye damage.
Precautionary statement(s)	
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Component		Classification	Concentration
Hydrochloric Acid			
CAS-No. EC-No.	7647-01-0 231-595-7	Met. Corr. 1; Skin Corr. 1B; Eye Dam. 1; STOT SE	>= 30 - < 50 %

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Index-No. Registration number	017-002-01-X 01-2119484862-27-XXXX	3; H290, H314, H318, H335 Concentration limits: >= 0,1 %: Met. Corr. 1, H290; >= 25 %: Skin Corr. 1B, H314; 10 - < 25 %: Skin Irrit. 2, H315; 10 - < 25 %: Eye Irrit. 2, H319; >= 10 %: STOT SE 3, H335;	

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

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice
First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air. Call in physician.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact
After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed
After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
Hydrogen chloride gas
Hydrogen chloride gas
Not combustible.

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Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® H^+, Merck Art. No. 101595). Dispose of properly. Clean up affected area.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
No metal containers.
Tightly closed.

Storage class
Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Splash contact
Material: Latex gloves
Minimum layer thickness: 0,6 mm
Break through time: 120 min
Material tested:Lapren® (KCL 706 / Aldrich Z677558, Size M)

Body Protection
Acid-resistant protective clothing

Respiratory protection
required when vapours/aerosols are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.
Recommended Filter type: Filter type ABEK

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure
Do not let product enter drains.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Physical state	liquid
b)	Color	light yellow
c)	Odor	pungent
d)	Melting point/freezing point	-30 °C
e)	Initial boiling point and boiling range	> 100 °C - lit.
f)	Flammability (solid, gas)	No data available
g)	Upper/lower flammability or explosive limits	No data available
h)	Flash point	Not applicable
i)	Autoignition temperature	Not applicable
j)	Decomposition temperature	No data available
k)	pH	< 1 at 20 °C
l)	Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 2,3 mPa.s at 15 °C
m)	Water solubility	soluble
n)	Partition coefficient: n-octanol/water	No data available
o)	Vapor pressure	227 hPa at 21,1 °C 547 hPa at 37,7 °C
p)	Density	1,2 g/cm3 at 25 °C - lit.
	Relative density	No data available
q)	Relative vapor density	No data available
r)	Particle characteristics	No data available
s)	Explosive properties	Not classified as explosive.
t)	Oxidizing properties	none

9.2 Other safety information

No data available

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SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
no information available

10.5 Incompatible materials
Bases, Amines, Alkali metals, Metals, permanganates, for example potassium permanganate, Fluorine, metal acetylides, hexalithium disilicideMetals

10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture

Acute toxicity
Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract
Dermal: No data available

Skin corrosion/irritation
Remarks: Mixture causes burns.
Remarks: Mixture causes burns.

Serious eye damage/eye irritation
Remarks: Mixture causes serious eye damage.
Risk of blindness!

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
Mixture may cause respiratory irritation.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

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11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

RTECS: MW4025000
Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Components

Hydrochloric Acid

Acute toxicity
Oral: No data available
Inhalation: Cough Difficulty in breathing
Inhalation: absorption
Symptoms: mucosal irritations, Cough, Shortness of breath, Inhalation may lead to the formation of oedemas in the respiratory tract., Possible damages:, damage of respiratory tract, tissue damage
Dermal: No data available

Skin corrosion/irritation
Skin - reconstructed human epidermis (RhE)
Result: Corrosive
(OECD Test Guideline 431)

Serious eye damage/eye irritation
Eyes - Bovine cornea
Result: Corrosive
(OECD Test Guideline 437)

Respiratory or skin sensitization
Maximization Test - Guinea pig
Result: negative
(OECD Test Guideline 406)

Germ cell mutagenicity
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Result: Conflicting results have been seen in different studies.

Carcinogenicity
Carcinogenicity - Did not show carcinogenic effects in animal experiments. (IUCLID)

Reproductive toxicity
No data available

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

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Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Inhalation may lead to the formation of oedemas in the respiratory tract., Possible damages:, damage of respiratory tract, tissue damage

Specific target organ toxicity - repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard
No aspiration toxicity classification

SECTION 12: Ecological information

12.1 Toxicity

Mixture
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties
Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects
No data available

Components

Hydrochloric Acid
No data available

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

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 1789 IMDG: 1789 IATA: 1789

14.2 UN proper shipping name
ADR/RID: HYDROCHLORIC ACID
IMDG: HYDROCHLORIC ACID
IATA: Hydrochloric acid

14.3 Transport hazard class(es)
ADR/RID: 8 IMDG: 8 IATA: 8

14.4 Packaging group
ADR/RID: II IMDG: II IATA: II

14.5 Environmental hazards
ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user
Tunnel restriction code : (E)

Further information : No data available

SECTION 15: Regulatory information

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

Other regulations
Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment
A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

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

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	
H318	Causes skin irritation.
H319	Causes serious eye damage.
H335	Causes serious eye irritation.

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Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Classification of the mixture		**Classification procedure:**
Met. Corr.1	H290	Calculation method
Skin Corr.1B	H314	Calculation method
Eye Dam.1	H318	Calculation method
STOT SE3	H335	Calculation method

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Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. ACTEF - Al Saidain Chemical Treatment of Environment Factory and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See the reverse side of invoice or packing slip for additional terms and conditions of sale.

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