

MATERIAL SAFETY DATA SHEET - MSDS

HYDROCHLORIC ACID SOLUTION

Product:
SDS No. : 004

Version : 02

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Date : 19-10-2016

01 - IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

PRODUCT NAME: HYDROCHLORIC ACID SOLUTION
 SDS No.: 004
 MANUFACTURER: Qatar Vinyl Company Ltd.
 P. O. Box 24440, Doha, State of Qatar
 Tel : +974 44765888; Fax : +974 44765777
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02 - COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	Synonyms	EC-No.	CAS No.	Concentration Wt. %	Classification Directive 67/548/EEC	Classification Regulation (EC) No 1272/2008
Hydrochloric Acid	Hydrochloric Acid	231-595-7	7647-01-0	15% - 32%	C; R34 Xi; R37	Met. Corr. 1; H290 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335

03 - HAZARDS IDENTIFICATION

MOST IMPORTANT HAZARDS
HEALTH EFFECTS

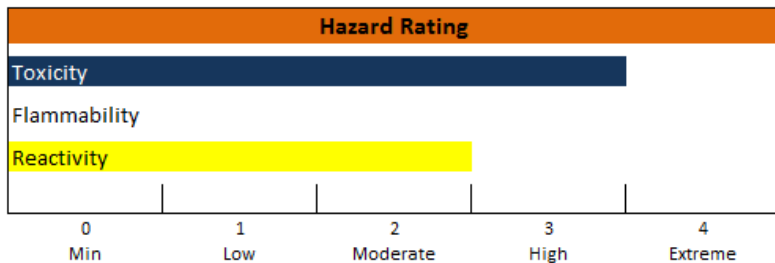
SAFETY INFORMATION : PLEASE READ THIS SHEET CAREFULLY
 Cause severe skin burn and eye damage C ≥ 25%, 1B; H314
 Cause skin and eye irritation; 10% ≤ C ≤ 25%, 1; H318
 Inhalation of vapors may cause Respiratory irritation; C ≥ 10%, STOT SE 3; H335
 Corrosive to metals, 1; H290,
 Forms flammable and explosive hydrogen through corrosion of metals. Thermal decomposition giving toxic products

PHYSICAL AND CHEMICAL HAZARDS

LABEL ELEMENTS (REGULATION (EC) NO 1272/2008) IN ACCORDANCE WITH GHS

Name:
Hazard pictograms:

Hydrochloric acid%



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Signal word
Hazard statement

Danger
May be corrosive to metals.
Causes severe skin burns and eye damage.
May cause respiratory irritation.

Precautionary statements:

Prevention:
Do not breathe gas/mist/vapours/spray.
Response:
IF ON SKIN (or hair): Remove/ 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.
Immediately call a POISON CENTER or doctor/ physician.
Absorb spillage to prevent material damage.
Storage:
Store in a well-ventilated place. Keep container tightly closed.

OTHER HAZARDS

Potential health effects:
Acute exposure: Corrosive liquid
Inhalation: Severely irritating to respiratory system Risk of pulmonary oedema
Ingestion: Risk of burns to the mouth, oesophagus and stomach
Environmental Effects:
Very toxic to daphnia Very toxic to algae. Harmful to fish.
Physical and chemical hazards:
Forms flammable and explosive hydrogen through corrosion of metals. Thermal decomposition giving toxic products
Decomposition products: See chapter 10
Other:
Results of PBT and vPvB assessment: This substance is not considered to be persistent, bio accumulating, toxic (PBT), nor very persistent, very bio accumulating (vPvB).

EMERGENCY OVERVIEW

Inhalation of vapors or mists causes irritation to the respiratory tract and can cause tracheal and bronchial epithelium necrosis, cough, choking, and ulceration later on. Permanent eye damage may result from splashes. Ingestion is unlikely but if occurs symptoms include grey tongue color, damage of mucus membrane, nausea, and vomiting.
Do not use water on large spills.

04 - FIRST AID MEASURES

GENERAL ADVICE

Under the shower: Take off immediately all contaminated clothing (including shoes)

INHALATION

Move to fresh air, Oxygen or artificial respiration
If needed, hospitalize

SKIN CONTACT

Wash immediately and abundantly with water for at least 15 minutes
Transport to hospital or doctor.

EYE CONTACT

Wash open eyes immediately and abundantly with water for at least 15 minutes
Consult an ophthalmologist immediately.
Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

INGESTION

Don not induces vomiting, rinse mouth and lips with plenty of water if the subject is conscious, then hospitalize.

PROTECTION OF FIRST-AIDERS

In case of insufficient ventilation, wear suitable respiratory equipment
Acid gloves, chemical goggles or face shield, gum boots and acid suits.

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INFORMATION FOR DOCTORS

Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% Oxygen initially.

05 - FIRE-FIGHTING MEASURES

EXPLOSIVE LIMITS (vol. % in air)

LEL: Not applicable ; UEL: Not applicable

FLASH POINT

Nonflammable

AUTO - IGNITION TEMPERATURE

Not applicable

SUITABLE EXTINGUISHING MEDIA

Foam; Dry powder ; Carbon dioxide (CO2)

EXTINGUISHING MEDIA WHICH ARE NOT SUITABLE

Water

SPECIAL HAZARDS

Thermal decomposition giving toxic and corrosive products:

Hydrogen chloride gas ; Chlorine gas

Reacts with metal producing flammable/explosive hydrogen gas

ADVICE FOR FIREFIGHTERS

Specific Methods:

Cool fire exposed containers/tanks with water spray

Prevent spillage from entering drains or waterways.

Special protective actions for fire-fighters:

In the event of fire or leakage, wear self-contained breathing apparatus. Acid resistant clothing.

06 - ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTION

Restrict access to the spill area.

Prohibit contact with skin and eyes and inhalation of vapors

Isolate and ventilate area, stay upwind. Use chemical suits, gloves, gum boots, with appropriate face and respiratory protection.

ENVIRONMENTAL PROTECTION

Do not allow to enter sewerage system, drains and waterways.

Restrict evaporation of the product by using foam.

Contain by damming, control spread of gases, fumes and /or dust with water curtains.

METHODS FOR CLEANING UP

Neutralize with diluted sodium hydroxide or by lime sand or sodium carbonate and flush with plenty of water.

Recovery

Pump into an inert labeled emergency container (if possible)

07 - HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Technical measures/Precautions

Storage and handling precautions applicable to products: Liquid. With suffocating vapors. Corrosive. Provide sufficient air exchange and/or exhaust in work rooms.

Provide self-contained breathing apparatus nearby (for emergency intervention).

Provide showers, eye-baths. Provide water supplies near the point of use. Provide self-contained breathing apparatus nearby.

Safe handling advice

Avoid splashing when handling.

Use goggles or face shields, acid gloves, aprons and gum boots while handling containers. For personal protection see also section 8.

Use product only in closed system.

Hygiene measures

Prohibit contact with skin and eyes and inhalation of vapors. When using, do not eat, drink or smoke. Wash hands after handling. Remove contaminated clothing and protective equipment before entering eating areas.

STORAGE

Technical measures/Storage conditions

Keep container tightly closed in a cool, well-ventilated place

Protect from moisture. Provide anti-corrosion protected electrical equipment in a dyke area.

Store at ambient temperature

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Provide a catch-tank and an impermeable corrosion-resistant floor with drainage to a neutralization tank within a dyke area

Incompatible products

Oxidizing agents, Anhydrous strong bases or concentrated solutions, Finely divided metals

PACKAGING MATERIALS

Recommended
To be avoided

Vulcanized or rubber coated steel, Plastic drum, Reinforced polyester
Light metals and alloys (corrosion).

08 - EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS

Exposure limits Values

US OSHA PEL Ceiling: 5ppm
US ACGIH TLV (2007)-Ceiling: 2ppm
NIOSH IDLH: 50ppm
EU ELV (2009) TWA: 5ppm (8mg/m³)
EH40 WEL (2007) TWA: 1ppm (2mg/m³); STEL: 5ppm (8mg/m³)

EXPOSURE CONTROLS

General protective provisions
Personal protection equipment

Ensure sufficient air exchange and/or exhaust in work areas
Respiratory protection
Low concentrations or short activity: Full mask. Recommended Filter type: A2B2
Respirators with combination filter for vapor/particulate (EN 141).
High concentrations or prolonged activity: Self-contained closed-circuit breathing apparatus compressed (EN 145).
Hand protection
Splash contact, intermittent and prolonged PVC gloves. Glove thickness: 1,2 mm
According to permeation index EN 374: 6 (time elapsed > 480 mins)
Eye/face protection
Safety glasses with side shields. Chemical Goggles. Full face shield.
Skin and body Protection
At the workplace: anti-acid suit, Boots
Intervention at incident: anti-acid diving suit
Others
Acid resistant coveralls; Impervious full protective suits.
Operators should be trained for safe use of this material.
Prohibit contact with skin and eyes and inhalation of vapors

Specific hygiene measures

09 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE (20°C)

Liquid

COLOUR

Slightly, yellow to green, or , colorless

ODOUR

Pungent; irritant

OLFACTORY THRESHOLD

1 - 5 ppm

MOLECULAR WEIGHT

36.5 g/mol

pH value

< 1 (at 20°C), strong acid

BOILING POINT/RANGE

80 °C (Concentration: 32%); 45 °C (Concentration: 37%)

MELTING POINT/RANGE

-42 °C (Concentration: 32%); -29 °C (Concentration: 37%)

FLASH POINT

Not applicable

AUTOIGNITION TEMPERATURE

Not applicable

EXPLOSIVE LIMITS

Lower

Not applicable

Higher

Not applicable

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EVAPORATION RATE	No data available
VAPOUR PRESSURE	30 hPa , at 20 °C (Concentration: 32%) 200 hPa , at 20 °C (Concentration: 37%)
VAPOUR DENSITY (Air = 1)	1.53 kg/m ³
LIQUID DENSITY	1.160 - 1.190 kg/m ³ , at 20 °C
WATER SOLUBILITY	completely soluble at 20 °C
PARTITION COEFFICIENT:	N-OCTANOL/WATER: Not relevant
VISCOSITY, KINEMATIC	1.7 mm ² /s at 20°C
SOLUBILITY IN OTHER SOLVENTS	Water soluble solvents

10 - STABILITY AND REACTIVITY

REACTIVITY & CHEMICAL STABILITY	The product is stable under normal handling and storage conditions.
HAZARDOUS REACTIONS	Forms flammable and explosive hydrogen through corrosion of metals.
CONDITIONS TO AVOID	Store protected from moisture and heat. Exposure to light.
MATERIALS TO AVOID	Metallic oxides, Strong oxidizing agents, perchlorates, nitrates, peroxides, Metals, Strong bases (Exothermic reaction.), Sulphides
HAZARDOUS DECOMPOSITION PRODUCTS	Thermal decomposition giving toxic and corrosive products : Toxic chlorinated products like Hydrogen chloride gas, Chlorine gas

11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY	
Inhalation	Severely irritating to respiratory system, Risk of pulmonary edema In animals: aerosol LC50/5 min/rat: 45.6 mg/l
Ingestion	Risk of burns in the mouth, the throat and in the stomach. Concentrated solutions State of shock, Severe burns in digestive system. In animals: LD50/rat: 700 mg/kg (as aqueous solution) (31.5 %)
Dermal	In animals: LD50/rabbit: > 5.010 mg/kg (as aqueous solution) (31,5 %)
LOCAL EFFECTS (Corrosion/Irritation/Serious Eye damage)	
Skin contact	Corrosive to skin Causes severe burns.
Eye contact	Corrosive to eyes Serious lesions with possible after-effects if not washed immediately
RESPIRATORY OR SKIN SENSITIZATION	
Inhalation	No data available
Skin contact	Not a skin sensitizer No effect is reported. (Method : Guinea pig maximization test, guinea pig)
CMR EFFECTS	
Mutagenicity	Available experimental data indicates no particular problems for man In vitro Ames test in vitro: negative In vitro test for chromosomal abnormalities on CHO cells: Inconclusive results In vitro gene mutations test on mammalian cells: positive In vivo There is no data available for this product.
Carcinogenicity	Based on the available data, the substance is not suspected of having carcinogenic potential In animals: Absence of carcinogenic effects (rat, lifetime, By inhalation)10ppm
Reproductive toxicity	Fertility: Based on the available data, the substance is not suspected of having nephrotoxic potential.
SPECIFI TARGET ORGAN TOXICITY	

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SINGLE EXPOSURE

Inhalation: Severely irritating to respiratory system

REPEATED EXPOSURE

Olfactory threshold: 1 - 5 ppm
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

ASPIRATION HAZARDS

In animals:
Inhalation: Local effects due to an irritant effect, NOAEL= 20ppm (rat, 3 months)
No data available.

12 - ECOLOGICAL INFORMATION

ACUTE TOXICITY

Fish

Harmful to fish.

LC50, 24 h : 20,5 mg/l (pH: 3,2 - 3,5)

Aquatic invertebrates

Very toxic to daphnia

LC50, 48 h (Daphnia magna (Water flea)) : 0,45 mg/l (Method: OECD Test Guideline 202, pH: 4,9)

Aquatic plants

Very toxic to algae.

EC r50, 72 h (Chlorella vulgaris (Fresh water algae)) : 0,73 mg/l (Method: OECD Test Guideline 201,

Microorganisms

pH: 4,7, Growth inhibition)

EC50, 3 h (Activated sludge) : 0,23 mg/l (Method: OECD Guideline 209, pH: 5,2, Respiration inhibition)

PERSISTENCE AND DEGRADABILITY

Biodegradation (In water):

Not relevant

BIOACCUMULATIVE POTENTIAL

Not relevant

MOBILITY IN SOIL

Distribution among environmental compartments

Absorption / desorption (Substance) :

soluble

RESLUTS OF PBT AND vPvB ASSESSMENT

This substance is not considered to be persistent, bioaccumulating, toxic (PBT), nor very persistent, very bioaccumulating (vPvB).

13 - DISPOSAL CONSIDERATIONS

DISPOSAL OF PRODUCT

Dilute with water. Neutralize with sodium carbonate.

DISPOSAL OF PACKAGE

Clean container with water. Recover waste water for processing later.

14 - TRANSPORT INFORMATION

UN Proper Shipping name

HYDROCHLORIC ACID

UN Number

1789

LABEL



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ADR

Class : 8; Label 8; Packing Group II; Environmentally hazardous: no;

ADNR

Class : 8; Label 8; Packing Group II; Environmentally hazardous: no;

RID

Class : 8; Label 8; Packing Group II; Environmentally hazardous: no;

IMDG

Class : 8; Label 8; Packing Group II; Environmentally hazardous: no; EmS Number: F-A, S-B

IATA Cargo

Class : 8; Label 8; Packing Group II; Environmentally hazardous: no;

IATA Passenger

Class : 8; Label 8; Packing Group II; Environmentally hazardous: no;

15 - REGULATORY INFORMATION

SAFETY DATA SHEETS

Safety data sheets: according to Regulation (EC) No. 1907/2006

EC CLASSIFICATION / LABELLING

(EC) No 1272/2008 (GHS)

ADDITIONAL REGULATIONS

Hazardous Waste Regulations 2005

Inventory of Sources and Releases Reporting Form, 1999. Environment Agency, United Kingdom. As amended by 2002 Pollution Inventory Substances Lists, 2002.

Young workers 94/33/EC: Banned and/or restricted

UK REGULATION Chip3: Chemical (Hazard Information and Packaging for Supply) Regulations 2002

INVENTORIES

EINECS: Conforms to

TSCA: Conforms to

AICS: Conforms to

DSL: All components of this product are on the Canadian DSL list.

ENCS (JP): Conforms to

KECI (KR): Conforms to

PICCS (PH): Conforms to

IECSC (CN): Conforms to

16 - OTHER INFORMATION

Full text of R, H, EUH-phrases referred to under sections 2 and 3

R34 Causes burns.

R37 Irritating to respiratory system.

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

RECOMMENDED USES

Reagent for analysis; neutralization; food products

BIBLIOGRAPHY REFERENCES

Fiche toxicologique INRS : N°13 (ACIDE CHLORHYDRIQUE)

THESAURUS

NOAEL : No Observed Adverse Effect Level (NOAEL)

LOAEL : Lowest Observed Adverse Effect Level (LOAEL)

bw : Body weight

food : oral feed

dw : Dry weight

FURTHER INFORMATION

THIS PRODUCT MUST BE HANDLED ONLY BY PERSONNEL WELL INFORMED OF SAFETY CONDITIONS

WHEN USED IN FORMULATIONS, CONTACT US FOR LABELLING.

This information applies to the PRODUCT AS SUCH and conforming to specifications of QVC.

In case of formulations or mixtures, it is necessary to ascertain that a new danger will not appear.

The information contained is based on our knowledge of the product, at the date of publishing and it is given quite sincerely.

However the revision of some data is in progress.

Users are advised of possible additional hazards when the product is used in applications for which it was not intended. This sheet shall only be used and reproduced for prevention and security purposes.

The references to legislative, regulatory and codes of practice documents cannot be considered as exhaustive.

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It is the responsibility of the person receiving the product to refer to the totality of the official documents concerning the use, the possession and the handling of the product.

It is also the responsibility of the handlers of the product to pass on to any subsequent persons who will come into contact with the product (usage, storage, cleaning of containers, other processes) the totality of the information contained within this safety data sheet and necessary for safety at work, the protection of health and the protection of environment.