

Material Safety Data Sheet

Date Printed: 20/FEB/2008
Date Updated: 11/APR/2006
Version 1.8
Regulation (EC) No 1907/2006

1 - Product and Company Information

Product Name HYDROCHLORIC ACID 0.1 MOL/L, 0.1 N &
Product Number 35335
Company Sigma-Aldrich Company Ltd.
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2 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Not hazardous according to Directive 67/548/EEC.

3 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number	
HYDROCHLORIC ACID SOLUTION, >0.0365% - <1%	7647-01-0	231-595-7	None	
Ingredient Name	Percent	CAS #	EC no	Annex I Index Number
WATER	>= 95 < 99.8	7732-18-5	231-791-2	None
HYDROCHLORIC ACID >=25%	>= 0.2 < 5	7647-01-0	231-595-7	017-002-01-X

Symbols: C

R-Phrases: 34-37

Causes burns. Irritating to respiratory system.

Formula HCL
Molecular Weight 36.46 AMU
Synonyms Acide chlorhydrique (French) * Acido cloridrico
(Italian) * Anhydrous hydrochloric acid *
Chloorwaterstof (Dutch) * Chlorohydric acid *
Chlorowodor (Polish) * Chlorwasserstoff (German)
* Hydrochloride * Hydrogen chloride (ACGIH:OSHA)
* Muriatic acid * Spirits of salt

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give
artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of vapors.

METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe vapor. Do not get in eyes, on skin, on clothing.

STORAGE

Conditions of Storage: Keep tightly closed.

SPECIAL REQUIREMENTS: May develop pressure. Open carefully.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Discard contaminated shoes. Wash contaminated clothing before reuse.

EXPOSURE LIMITS

Country	Source	Type	Value
Poland		NDS	5
Poland		NDSch	10

Poland NDSP -

EXPOSURE LIMITS - EUROPEAN UNION

Source	Type	Value
OEL	OEL	8 mg/m3
		5 ppm

EXPOSURE LIMITS - DENMARK

Source	Type	Value
OEL	TWA	7 mg/m3
		5 ppm

Remarks: L

EXPOSURE LIMITS - GERMANY

Source	Type	Value
TRGS 900	OEL	8 mg/m3

Remarks: =1=
Remarks: Y

EXPOSURE LIMITS - NORWAY

Source	Type	Value
	OEL	7 mg/m3
		5 ppm

Remarks: T

EXPOSURE LIMITS - SWEDEN

Source	Type	Value
	CLV (Ceili	8 mg/m3
		5 ppm

EXPOSURE LIMITS - SWITZERLAND

Source	Type	Value
OEL	OEL	7.5 mg/m3
		5 ppm

Remarks: C

EXPOSURE LIMITS - UNITED KINGDOM

Source	Type	Value
OEL	OEL	2 mg/m3
		1 ppm
OEL	STEL	8 mg/m3
		5 ppm

Remarks: Indicative limit value

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Physical State:	Liquid
Property	Value	At Temperature or Pressure
pH	N/A	

BP/BP Range	N/A
MP/MP Range	N/A
Flash Point	N/A
Flammability	N/A
Autoignition Temp	N/A
Oxidizing Properties	N/A
Explosive Properties	N/A
Explosion Limits	N/A
Vapor Pressure	N/A
SG/Density	N/A
Partition Coefficient	N/A
Viscosity	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	N/A
Decomposition Temp.	N/A
Solvent Content	N/A
Water Content	N/A
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	N/A

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Bases, Amines, Alkali metals, Metals.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Hydrogen chloride gas.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: MW4025000

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 1789
Class: 8
PG: III
Proper Shipping Name: Hydrochloric acid

IMDG

UN#: 1789
Class: 8
PG: III
Proper Shipping Name: Hydrochloric acid
Marine Pollutant: No
Severe Marine Pollutant: No

IATA

UN#: 1789
Class: 8
PG: III
Proper Shipping Name: Hydrochloric acid
Inhalation Packing Group I: No

15 - Regulatory Information

Not hazardous according to Directive 67/548/EEC.

16 - Other Information

WARRANTY

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. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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