



SAFETY DATA SHEET

Creation Date 24-Aug-2009

Revision Date 13-Jun-2014

Revision Number 6

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Description: Hydrochloric acid, 37%
Cat No. : 450550000; 450550025
Synonyms Muriatic acid
Molecular Formula HCl.H₂O
Reach Registration Number 01-2119484862-27

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

Recommended Use Laboratory chemicals.
Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company Acros Organics BVBA
Janssen Pharmaceuticaaan 3a
2440 Geel, Belgium
E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Substances/mixtures corrosive to metal Category 1

Health hazards

Skin Corrosion/irritation Category 1 B
Serious Eye Damage/Eye Irritation Category 1
Specific target organ toxicity - (single exposure) Category 3

Environmental hazards

Based on available data, the classification criteria are not met

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Symbol(s) C - Corrosive
R-phrases(s) R34 - Causes burns
R37 - Irritating to respiratory system

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

SAFETY DATA SHEET

Hydrochloric acid, 37%

Revision Date 13-Jun-2014

2.2. Label elements



Signal Word

Danger

Hazard Statements

- H290 - May be corrosive to metals
- H314 - Causes severe skin burns and eye damage
- H335 - May cause respiratory irritation

Precautionary Statements

- P234 - Keep only in original container
- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
- P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
- P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P310 - Immediately call a POISON CENTER or doctor/ physician

2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	CAS-No	EC-No.	Weight %	CLP Classification - Regulation (EC) No 1272/2008	DSD Classification - 67/548/EEC
Hydrochloric acid	7647-01-0	231-595-7	35-38	Skin Corr. 1B (H314) Eye Dam. 1 (H318) STOT SE 3 (H335) Met. Corr. 1 (H290)	C; R34 Xi; R37
Water	7732-18-5	231-791-2	62-65	-	-

Reach Registration Number

01-2119484862-27

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

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

SAFETY DATA SHEET

Hydrochloric acid, 37%

Revision Date 13-Jun-2014

Ingestion	Do not induce vomiting. Call a physician or Poison Control Center immediately.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.
Protection of First-aiders	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

4.2. Most important symptoms and effects, both acute and delayed

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

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

Extinguishing media which must not be used for safety reasons

No information available.

5.2. Special hazards arising from the substance or mixture

Corrosive Material. Causes burns by all exposure routes. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Hydrogen chloride gas.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

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.

6.2. Environmental precautions

Should not be released into the environment. See Section 12 for additional ecological information.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SAFETY DATA SHEET

Hydrochloric acid, 37%

Revision Date 13-Jun-2014

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Do not ingest.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): **EU** - Commission Directive 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC on the protection of the health and safety of workers from the risks related to chemical agents at work. **UK** - EH40/2005 Containing the workplace exposure limits (WELs) for use with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). Updated by September 2006 official press release and October 2007 Supplement. **IRE** - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority.

Component	European Union	The United Kingdom	France	Belgium	Spain
Hydrochloric acid	TWA: 5 ppm 8 hr TWA: 8 mg/m ³ 8 hr STEL: 10 ppm 15 min STEL: 15 mg/m ³ 15 min	STEL: 5 ppm 15 min STEL: 8 mg/m ³ 15 min TWA: 1 ppm 8 hr TWA: 2 mg/m ³ 8 hr	STEL / VLCT: 5 ppm. STEL / VLCT: 7.6 mg/m ³ .	TWA: 5 ppm 8 uren TWA: 8 mg/m ³ 8 uren STEL: 10 ppm 15 minuten STEL: 15 mg/m ³ 15 minuten	STEL / VLA-EC: 10 ppm (15 minutos). STEL / VLA-EC: 15 mg/m ³ (15 minutos). TWA / VLA-ED: 5 ppm (8 horas) TWA / VLA-ED: 7.6 mg/m ³ (8 horas)

Component	Italy	Germany	Portugal	The Netherlands	Finland
Hydrochloric acid	TWA: 5 ppm 8 ore. TWA: 8 mg/m ³ 8 ore. STEL: 10 ppm 15 minuti. STEL: 15 mg/m ³ 15 minuti.	TWA: 2 ppm (8 Stunden). AGW - exposure factor 2 TWA: 3 mg/m ³ (8 Stunden). AGW - exposure factor 2 TWA: 2 ppm (8 Stunden). MAK TWA: 3.0 mg/m ³ (8 Stunden). MAK Höhepunkt: 4 ppm Höhepunkt: 6 mg/m ³	Ceiling: 2 ppm	STEL: 15 mg/m ³ 15 minuten TWA: 8 mg/m ³ 8 uren	STEL: 5 ppm 15 minuutteina STEL: 7.6 mg/m ³ 15 minuutteina

Component	Austria	Denmark	Switzerland	Poland	Norway
Hydrochloric acid	MAK-KZW: 10 ppm 15 Minuten MAK-KZW: 15 mg/m ³ 15 Minuten MAK-TMW: 5 ppm 8 Stunden MAK-TMW: 8 mg/m ³ 8 Stunden	Ceiling: 5 ppm Ceiling: 8 mg/m ³	STEL: 4 ppm 15 Minuten STEL: 6 mg/m ³ 15 Minuten TWA: 2 ppm 8 Stunden TWA: 3.0 mg/m ³ 8 Stunden	STEL: 10 mg/m ³ 15 minutach TWA: 5 mg/m ³ 8 godzinach	Ceiling: 5 ppm Ceiling: 7 mg/m ³

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic

SAFETY DATA SHEET

Hydrochloric acid, 37%

Revision Date 13-Jun-2014

Hydrochloric acid	TWA: 5 ppm TWA: 8.0 mg/m ³ STEL : 10 ppm STEL : 15.0 mg/m ³	TWA-GVI: 5 ppm 8 satima. TWA-GVI: 8 mg/m ³ 8 satima. STEL-KGVI: 10 ppm 15 minutama. STEL-KGVI: 15 mg/m ³ 15 minutama.	TWA: 5 ppm 8 hr. TWA: 8 mg/m ³ 8 hr. STEL: 10 ppm 15 min STEL: 15 mg/m ³ 15 min	STEL: 10 ppm STEL: 15 mg/m ³ TWA: 5 ppm TWA: 8 mg/m ³	TWA: 8 mg/m ³ 8 hodinách. Ceiling: 15 mg/m ³
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Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Hydrochloric acid	TWA: 5 ppm 8 tundides. TWA: 8 mg/m ³ 8 tundides. STEL: 10 ppm 15 minutites. STEL: 15 mg/m ³ 15 minutites.	TWA: 5 ppm 8 hr TWA: 8 mg/m ³ 8 hr STEL: 10 ppm 15 min STEL: 15 mg/m ³ 15 min	STEL: 5 ppm STEL: 7 mg/m ³ TWA: 5 ppm TWA: 7 mg/m ³	STEL: 16 mg/m ³ 15 percekben. CK TWA: 8 mg/m ³ 8 órában. AK	STEL: 5 ppm STEL: 8 mg/m ³

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Hydrochloric acid	STEL: 10 ppm STEL: 15 mg/m ³ TWA: 5 ppm TWA: 8 mg/m ³	TWA: 5 ppm IPRD TWA: 8 mg/m ³ IPRD STEL: 10 ppm STEL: 15 mg/m ³	TWA: 5 ppm 8 Stunden TWA: 8 mg/m ³ 8 Stunden STEL: 10 ppm 15 Minuten STEL: 15 mg/m ³ 15 Minuten	TWA: 5 ppm TWA: 8 mg/m ³ STEL: 10 ppm 15 minuti STEL: 15 mg/m ³ 15 minuti	TWA: 5 ppm 8 ore TWA: 8 mg/m ³ 8 ore STEL: 10 ppm 15 minute STEL: 15 mg/m ³ 15 minute

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Hydrochloric acid	MAC: 5 mg/m ³	Ceiling: 15 mg/m ³ TWA: 5 ppm TWA: 8.0 mg/m ³	TWA: 5 ppm 8 urah anhydrous TWA: 8 mg/m ³ 8 urah anhydrous STEL: 10 ppm 15 minutah anhydrous STEL: 16 mg/m ³ 15 minutah anhydrous	CLV: 5 ppm CLV: 8 mg/m ³	TWA: 5 ppm 8 saat TWA: 8 mg/m ³ 8 saat STEL: 10 ppm 15 dakika STEL: 15 mg/m ³ 15 dakika

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS70 General methods for sampling airborne gases and vapours

Derived No Effect Level (DNEL) See table for values

Route of exposure	Acute effects (local)	Acute effects (systemic)	Chronic effects (local)	Chronic effects (systemic)
Oral Dermal Inhalation				
	15 mg/m ³		8 mg/m ³	

Predicted No Effect Concentration (PNEC) See values below.

Fresh water	36 µg/l
Marine water	36 µg/l
Water Intermittent	45 µg/l
Microorganisms in sewage treatment	36 µg/l

SAFETY DATA SHEET

Hydrochloric acid, 37%

Revision Date 13-Jun-2014

8.2. Exposure controls

Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection Goggles (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Butyl rubber	> 480 minutes	0.5 mm	EN 374	As tested under EN374-3 Determination of Resistance to Permeation by Chemicals
Nitrile rubber	> 480 minutes	0.35 mm		
Neoprene gloves	> 480 minutes	0.5 mm		
Viton (R)	> 480 minutes	0.4 mm		
PVC	> 480 minutes	0.5 mm		

Skin and body protection Long sleeved clothing

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Large scale/emergency use Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
Recommended Filter type: Particulates filter conforming to EN 143 or Acid gases filter: Type E, Yellow.

Small scale/Laboratory use Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141
When RPE is used a face piece Fit Test should be conducted

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls No information available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance Colorless
Physical State Liquid
Odor pungent
Odor Threshold No data available
pH < 1

SAFETY DATA SHEET

Hydrochloric acid, 37%

Revision Date 13-Jun-2014

Melting Point/Range	-35 °C / -31 °F	
Softening Point	No data available	
Boiling Point/Range	57 °C / 135 °F	@ 760 mmHg
Flash Point	No information available	Method - No information available
Evaporation Rate	No data available	
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	No data available	
Vapor Pressure	125 mbar @ 20 °C	
Vapor Density	1.27 (Air = 1.0)	(Air = 1.0)
Specific Gravity / Density	1.18	
Bulk Density	Not applicable	Liquid
Water Solubility	Miscible	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Autoignition Temperature	No data available	
Decomposition temperature	No data available	
Viscosity	1.8 mPa.s @ 15°C	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

9.2. Other information

Molecular Formula	HCl.H ₂ O
Molecular Weight	36.46

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	Contact with metals may evolve flammable hydrogen gas.

10.4. Conditions to avoid

Incompatible products. Excess heat.

10.5. Incompatible materials

Metals. Strong oxidizing agents. sodium hypochlorite. Amines. Bases. Fluorine. Cyanides. alkaline.

10.6. Hazardous decomposition products

Hydrogen chloride gas.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information

(a) acute toxicity;

Oral	Based on available data, the classification criteria are not met
Dermal	Based on available data, the classification criteria are not met
Inhalation	Based on available data, the classification criteria are not met

SAFETY DATA SHEET

Hydrochloric acid, 37%

Revision Date 13-Jun-2014

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrochloric acid	700 mg/kg (Rat)	5010 mg/kg (Rabbit)	3124 ppm (Rat) 1 h

(b) skin corrosion/irritation; Category 1 B

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;
Respiratory No data available
Skin No data available

(e) germ cell mutagenicity; No data available
 Mutagenic effects have occurred in experimental animals

(f) carcinogenicity; No data available
 The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	EU	UK	Germany	IARC
Hydrochloric acid				Group 3

(g) reproductive toxicity; No data available
Reproductive Effects Experiments have shown reproductive toxicity effects on laboratory animals.
Developmental Effects Developmental effects have occurred in experimental animals.
Teratogenicity Teratogenic effects have occurred in experimental animals.

(h) STOT-single exposure; Category 3

(i) STOT-repeated exposure; No data available
Target Organs Skin, Respiratory system, Eyes, Gastrointestinal tract (GI), Liver, Kidney, Teeth.

(j) aspiration hazard; No data available

Other Adverse Effects See actual entry in RTECS for complete information

Symptoms / effects, both acute and delayed 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

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity
Ecotoxicity effects Do not empty into drains.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Hydrochloric acid	282 mg/L LC50 96 h	-	-	-

12.2. Persistence and degradability
Persistence Persistence is unlikely, based on information available.

12.3. Bioaccumulative potential Bioaccumulation is unlikely

12.4. Mobility in soil Water Soluble. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

SAFETY DATA SHEET

Hydrochloric acid, 37%

Revision Date 13-Jun-2014

12.5. Results of PBT and vPvB assessment

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

12.6. Other adverse effects

Endocrine Disruptor Information
Persistent Organic Pollutant
Ozone Depletion Potential

This product does not contain any known or suspected endocrine disruptors
This product does not contain any known or suspected substance
This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point.

European Waste Catalogue (EWC)

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

Other Information

Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not dispose of waste into sewer. Large amounts will affect pH and harm aquatic organisms. Solutions with low pH-value must be neutralized before discharge.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1. UN number UN1789
14.2. UN proper shipping name Hydrochloric acid
14.3. Transport hazard class(es) 8
14.4. Packing group II

ADR

14.1. UN number UN1789
14.2. UN proper shipping name Hydrochloric acid
14.3. Transport hazard class(es) 8
14.4. Packing group II

IATA

14.1. UN number UN1789
14.2. UN proper shipping name Hydrochloric acid
14.3. Transport hazard class(es) 8
14.4. Packing group II

14.5. Environmental hazards No hazards identified

14.6. Special precautions for user No special precautions required

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories X = listed

SAFETY DATA SHEET

Hydrochloric acid, 37%

Revision Date 13-Jun-2014

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	AICS	KECL
Hydrochloric acid	231-595-7	-		X	X	-	X	X	X	X	X
Water	231-791-2	-		X	X	-	X	-	X	X	X

Component	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Hydrochloric acid	25 tonne	250 tonne

National Regulations

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Hydrochloric acid	WGK 1	

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.

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

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has been conducted by the manufacturer/importer

SECTION 16: OTHER INFORMATION

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

R34 - Causes burns

R37 - Irritating to respiratory system

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

H318 - Causes serious eye damage

H335 - May cause respiratory irritation

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

PNEC - Predicted No Effect Concentration

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC - Volatile Organic Compounds

SAFETY DATA SHEET

Hydrochloric acid, 37%

Revision Date 13-Jun-2014

Key literature references and sources for data

Suppliers safety data sheet,
Chemadvisor - LOLI,
Merck index,
RTECS

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]: Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Chemical incident response training.

Creation Date	24-Aug-2009
Revision Date	13-Jun-2014
Revision Summary	Update to Format.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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.

End of Safety Data Sheet