Safety Data Sheet

Hydrochloric Acid Solution

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

1.1 Product Identifier

Trade Name : Hydrochloric Acid Solution
Product Number : 38016SS7B
SDS Date : September 21, 2015

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Use : For use with Prussian Blue Iron Stain Kit.
Uses Advised Against : All other uses.

1.3 Details of the Supplier of the Substance or Mixture

Manufacturer/Preparer : Leica Biosystems Richmond, Inc
5205 Route 12
Richmond, IL 60071
800-225-3035
LBSNA-LBS-QA@LEICABIOSYSTEMS.COM

1.4 Emergency Telephone Number

Emergency Spill : 1-800-424-9300 (ChemTrec)
+1 703-527-3887 International calls (call collect)
13 11 26 (Australia 24 Hr Poisons Information Centre)
Other Information : 1-800-225-3035

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

CLP/GHS Classification (1272/2008) :

Physical:	Health:	Environmental:
Corrosive to Metals – Category 1	Not hazardous	Not hazardous

2.2 Label Elements

Hazard Pictograms :

Signal Word : WARNING!
Hazard Statements : H290 May be corrosive to metals.

Precautionary Statements : P234 Keep only in original packaging.

P390	Absorb spillage to prevent material damage.
P406	Store in corrosive resistant container with a resistant inner liner.
P501	Dispose of contents/container in accordance with all local and national regulations.

2.3 Other Hazards

Other hazards which do not result in classifications : None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number / EINECS Number / REACH Reg. Number	% (w/w)	CLP/GHS Classification (1272/2008)
Hydrochloric Acid	7647-01-0 231-595-7	<1	Skin Corrosion – Category 1B(H314) Eye Damage – Category 1 (H318) Specific Target Organ Toxicity (Single Exposure) – Category 3 (H335) Corrosive to Metals – Category 1 (H290) Acute Aquatic Toxicity – Category 3 (H402)

See Section 16 for full text of GHS and EU Classifications.

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 20 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly after handling. Get medical attention immediately.

Inhalation : Call medical doctor or poison control center immediately. Move exposed person to fresh air. If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing, such as a collar, tie, belt, or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

See Section 11 for more detailed information on health effects.

4.2 Most important symptoms and effects, both acute and delayed

Eye contact : May cause eye irritation.

Skin contact : Prolonged skin irritation may cause irritation.

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	:	No immediate treatment is normally required.
Specific treatments	:	No specific treatment.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media	:	Use dry chemical, alcohol foam, carbon dioxide (CO_2), or water spray.
Unsuitable extinguishing media	:	None known.

5.2 Special hazards arising from the substance or mixture

Unusual fire and explosion hazards	:	None known.
Combustion products	:	Hydrogen chloride; chlorine gas.

5.3 Advice for fire-fighters

Special protective equipment for fire-fighters	:	Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals.
Special protective action for fire-fighters	:	Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures

For emergency responders	:	Wear appropriate protective equipment. Eliminate all ignition sources and ventilate the area with explosion-proof equipment. Do not touch or walk through spilled material.

6.2 Environmental precautions

Environmental precautions	:	Prevent entry in storm sewers and waterways. Report spill as required by local and federal regulations.

6.3 Methods and materials for containment and cleaning up

For small & large spill	:	Stop spill at source if it is safe to do so. Absorb with an inert material and place into an appropriate container for disposal.

6.4 Reference to other sections

Refer to Section 8 for personal protective equipment, and Section 13 for disposal information.

SECTION 7: HANDLING and STORAGE

7.1 Precautions for safe handling

Protective measures	:	Avoid contact with eyes, skin, and clothing. Avoid breathing vapors or mists. Wash thoroughly after handling. Keep containers closed when not in use.

7.2 Conditions for safe storage, including any incompatibilities

Keep containers closed when not in use. Store in a cool area. Protect containers from physical damage.

7.3 Specific end use(s)

Industrial uses : None identified.
Professional uses : For use with Prussian Blue Iron Stain Kit.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Chemical Name	US OEL	EU IOEL	UK OEL	Germany OEL
Hydrochloric Acid	5 ppm ceiling OSHA PEL 2 ppm ceiling ACGIH TLV	5 ppm TWA 10 ppm STEL	1 ppm TWA 5 ppm STEL	2 ppm ceiling

Refer to local or national authority for exposure limits not listed above.

8.2 Exposure controls

Recommended monitoring procedure : None required.

Appropriate engineering controls : Use with adequate local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

Personal protective measures
Eye/face protection : Wear safety glasses or chemical goggles.
Skin protection : Impervious clothing as needed to avoid skin contact.
Hands : Impervious gloves recommended (butyl rubber).
Respiratory protection : None needed with adequate ventilation. If the occupational exposure limit is exceeded, use an approved respirator with organic vapor/formaldehyde cartridges. (In the United States, refer to 29 CFR 1910.1048 for cartridge change schedule requirements). Selection of respiratory protection depends on the contaminant type, form, and concentration. Select in accordance with OSHA 1910.134 or other applicable regulations and good industrial hygiene practice.
Other protection : Suitable washing facilities should be available.

SECTION 9: PHYSICAL and CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance : Colorless liquid
Odor : Odorless
Odor threshold : Not applicable
pH : <1.0
Melting/freezing point : Not available
Boiling point : Not available
Flash point : Not available

Lower flammability limit	:	Not available
Upper flammability limit	:	Not available
Evaporation rate	:	Not available
Vapor density (air = 1)	:	Not available
Vapor pressure	:	Not available
Specific gravity (H_2O = 1)	:	Not available
Relative density	:	Not available
Solubility	:	Soluble in water
Octanol/water partition coefficient	:	Not available
Autoignition temperature	:	Not available
Decomposition temperature	:	Not available
Viscosity	:	Not available
Explosive properties	:	Not explosive
Oxidizing properties	:	None
Molecular formula	:	Not available
Molecular weight	:	Not available

9.2 Other information

No additional information available

SECTION 10: STABILITY and REACTIVITY

10.1 Reactivity	:	This material is reactive with oxidizing materials, metals, and bases.
10.2 Chemical stability	:	Normally stable.
10.3 Possibility of hazardous reactions	:	None known.
10.4 Conditions to avoid	:	None known.
10.5 Incompatible materials	:	Oxidizing agents, metals, and bases.
10.6 Hazardous decomposition products	:	Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: hydrogen chloride; chlorine gas.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Potential health effects:

Eye contact	:	May cause eye irritation with redness and tearing.
Skin contact	:	Prolonged skin contact may cause irritation.
Inhalation	:	High mist concentrations may cause coughing and sneezing.
Ingestion	:	Swallowing may cause gastrointestinal effects, including irritation, nausea, and diarrhea.

Acute toxicity:

Product/ingredient name	Result	Species	Dose	Exposure
Hydrochloric Acid	LD50 Oral	Rat	238 – 277 mg/kg	-
	LD50 Dermal	Mouse	1,449 mg/kg	-
	LC50 Inhalation	Rat	3,124 ppm	1 hr

Skin corrosion/irritation	:	No data available for mixture.
Eye damage/irritation	:	No data available for mixture.
Respiratory irritation	:	No data available for mixture.
Respiratory sensitization	:	No data available for mixture.
Skin sensitization	:	No data available for mixture.

Germ cell mutagenicity : No data available for mixture.
Carcinogenicity : No data available for mixture.
Reproductive Toxicity : No data available for mixture.

Specific Target Organ Toxicity:
Single exposure : Hydrochloric acid mists are damaging to lungs in high concentrations.
Repeat exposure : None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Hydrochloric Acid	LC50 7.45 mg/L	Rainbow trout	96 hours

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 PVT and vPvB assessment : No data available.

12.6 Other adverse effects : No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORTATION INFORMATION

	14.1 UN Number	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 Packing group	14.5 Environmental hazards
US DOT	UN1789	Hydrochloric Acid	8	III	No
Canada TDG	UN1789	Hydrochloric Acid	8	III	No

EU ADR/RID	UN1789	Hydrochloric Acid	8	III	No
IMDG	UN1789	Hydrochloric Acid	8	III	No
IATA	UN1789	Hydrochloric Acid	8	III	No

14.6 Special precautions for user : None.

14.7 Transport in bulk according to Annex III MARPOL 73/78 and the IBC Code : Not determined

SECTION 15: REGULATORY INFORMATION

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

US Regulations

TSCA Inventory : All of the components are listed on the TSCA Inventory.
SARA 302 : This product does not contain any chemicals regulated under SARA 302.
SARA 311 Hazard Classification : This product does not contain any chemicals regulated under SARA 311.
SARA 313 : This product does not contain any chemicals regulated under SARA 313.
CERCLA Section 103 : This product does not contain any chemicals regulated under CERCLA.
California Prop 65 : This product contains the following chemical(s) which are known to the state of California to cause cancer, reproductive toxicity, or birth defects: None known.

SECTION 16: OTHER INFORMATION

Revision history : Updated formatting

CLP/GHS Classification and H Phrases for Reference (See Section 3)

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H335 May cause respiratory tract irritation.
H402 Harmful to aquatic life.

NFPA Rating	Health: 1	Fire: 0	Instability: 0
HMIS Rating	Health: 1	Fire: 0	Physical Hazard: 0

Notice to reader:
This Safety Data Sheet (SDS) has been prepared in accordance with the Classification, Labelling, and Packaging (CLP) regulation in the EU and the Globally Harmonized System (GHS) (29CFR 1910.1200) in the US. It complies with the requirements of the Canadian Controlled Products Regulations. To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.