SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
WHS Regulations

Revision date 24-Jul-2024 **Revision Number** 1.01

Section 1: Identification: Product identifier and chemical identity

Product identifier

Product Name Aluminum AA Standard: 1000 µg/mL Al in 5% HCl [500ml bottle]

Product Code(s) 5190-8257

Other means of identification

Proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric acid)

Chemical name
Pure substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Recommended use Reagents and Standards for Analytical Chemical Laboratory Use.

Uses advised against No information available.

Illicit Drug Precursors/Reagents This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list. Verify requirements related to using, handling, and storing these substances.

Chemicals of Security Concern This product contains one or more substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern.

Details of manufacturer or importer

Supplier

Agilent Technologies Australia Pty Ltd
679 Springvale Road
Mulgrave
Victoria 3170, Australia

1800 802 402

For further information, please contact

Contact Point Product Safety Department

E-mail address pdl-msds_author@agilent.com

Emergency telephone number

Emergency telephone number CHEMTREC®: +(61)-290372994

Section 2: Hazard(s) identification

GHS Classification

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2

Label elements

Corrosion



Signal word

WARNING

Hazard statements

May be corrosive to metals.
Causes skin irritation.
Causes serious eye irritation.

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling.
Keep only in original packaging.
Wear protective gloves/clothing and eye/face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of water and soap.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Absorb spillage to prevent material damage.

Precautionary Statements - Storage

Store in corrosion resistant container with a resistant inner liner.

Other hazards which do not result in classification

No information available.

Section 3: Composition/information on ingredients

Chemical name	CAS No.	Weight-%
Hydrochloric acid	7647-01-0	0 - 10%
Non-hazardous ingredients	Proprietary	Balance

Section 4: First aid measures

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Emergency telephone number	Poisons Information Centre, Australia: 13 11 26 Poisons Information Centre, New Zealand: 0800 764 766
Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get medical attention if irritation develops and persists.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a doctor.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed

Symptoms	May cause redness and tearing of the eyes. Burning sensation.

Indication of any immediate medical attention and special treatment needed

Note to doctors	Treat symptomatically.

Section 5: Firefighting measures

Suitable Extinguishing Media

Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

Specific hazards arising from the chemical	No information available.

Special protective actions for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
Hazchem code	2X

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required.
Other information	Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions	Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.

Precautions to prevent secondary hazards

Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: Handling and storage, including how the chemical may be safely used

Precautions for safe handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before re-use.
General hygiene considerations	Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Regular cleaning of equipment, work area and clothing is recommended.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other

materials.

Incompatible materials Oxidising agent. Strong acids. Strong bases.

Section 8: Exposure controls and personal protection

Control parameters

Exposure Limits

Chemical name	Australia	New Zealand	ACGIH TLV
Hydrochloric acid 7647-01-0	Peak: 5 ppm Peak: 7.5 mg/m³	Ceiling: 5 ppm Ceiling: 7.5 mg/m³	Ceiling: 2 ppm

Chemical name	European Union	United Kingdom	Germany DFG
Hydrochloric acid 7647-01-0	TWA: 5 ppm TWA: 8 mg/m³ STEL: 10 ppm STEL: 15 mg/m³	TWA: 1 ppm TWA: 2 mg/m³ STEL: 5 ppm STEL: 8 mg/m³	TWA: 2 ppm TWA: 3.0 mg/m³ Peak: 4 ppm Peak: 6 mg/m³

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

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles). If splashes are likely to occur, wear safety glasses with side-shields.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing.

Hand protection Wear protective Neoprene™ gloves. The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. Wear suitable gloves. Impervious gloves.

Respiratory protection Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

Thermal hazards No information available.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Colour	colourless
Odour	Odourless.
Odour threshold	No information available

Property	**Values**	**Remarks • Method**
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapour pressure	No data available	None known
Relative vapour density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Auto-ignition temperature	590 °C	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

VOC content	No information available
Particle characteristics	No information available

Section 10: Stability and reactivity

Reactivity

Reactivity No information available.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Conditions to avoid

Conditions to avoid Exposure to air or moisture over prolonged periods.

Incompatible materials

Incompatible materials Oxidising agent. Strong acids. Strong bases.

Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

Section 11: Toxicological information

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

Skin contact Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components).

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Symptoms Redness. May cause redness and tearing of the eyes.

Acute toxicity .

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	99,999.00	mg/kg
ATEmix (dermal)	99,999.00	mg/kg
ATEmix (inhalation-gas)	99,999.00	ppm
ATEmix (inhalation-vapour)	99,999.00	mg/l
ATEmix (inhalation-dust/mist)	99,999.00	mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Hydrochloric acid	238 - 277 mg/kg (Rat)	> 5010 mg/kg (Rabbit)	= 1.68 mg/L (Rat) 1 h

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Classification based on data available for ingredients. Causes skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitisation No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Section 12: Ecological information

Ecotoxicity

Aquatic ecotoxicity The environmental impact of this product has not been fully investigated.

Unknown aquatic toxicity 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Terrestrial ecotoxicity There is no data for this product.

Persistence and degradability

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation There is no data for this product.

Mobility

Mobility No information available.

Other adverse effects

Other adverse effects No information available.

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors.

Chemical name	EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation	EU - REACH (1907/2006) - Endocrine Disruptor Assessment List of Substances
Hydrochloric acid	-	-.

Section 13: Disposal considerations

Disposal methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not re-use empty containers.

See section 8 for more information

Section 14: Transport information

ADG

UN number or ID number UN3264
Proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric acid)
Transport hazard class(es) 8
Packing group III
Special Provisions 223, 274
Description UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric acid), 8, III

Limited quantity (LQ)	5 L
Hazchem code	2X

IATA

UN number or ID number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric acid)
Transport hazard class(es)	8
Packing group	III
ERG Code	8L
Special Provisions	A3, A803
Description	UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric acid), 8, III

IMDG Not regulated

UN number or ID number	UN3264
UN proper shipping name	Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric acid)
Transport hazard class(es)	8
Packing group	III
EmS-No.	F-A, S-B
Special Provisions	223, 274
Marine pollutant	NP
Description	UN3264, Corrosive liquid, acidic, inorganic, n.o.s.(Hydrochloric acid) , 8, III

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
No information available

Section 15: Regulatory information

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

National regulations

Australia

See section 8 for national exposure control parameters

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)
Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Poison Schedule Number 5

Australian Industrial Chemicals Introduction Scheme (AICIS)

Chemical name	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
Hydrochloric acid - 7647-01-0	Contact supplier for	-

Chemical name	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
	inventory compliance status Present	

Illicit Drug Precursors/Reagents
This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list. Verify requirements related to using, handling, and storing these substances.

Chemical name	Illicit Drug Precursors/Reagents
Hydrochloric acid - 7647-01-0	Category 3

Legend
Category 3 - Chemicals and apparatus that may be used in the illicit production of drugs. Purchases from this list should alert companies or organizations to seek further indicators of any suspicious orders or enquiries. No official reporting is required for items on this list unless considered warranted.

Chemicals of Security Concern
This product contains one or more substance(s) listed on the voluntary National Code of Practice for Chemicals of Security Concern.

Chemical name	Chemicals of Security Concern	Additional information
Hydrochloric acid - 7647-01-0	Present	-

Major hazard (accident/incident planning) regulation
Verify that license requirements are met

Named hazardous chemicals

Chemical name	Threshold quantity (T)
Hydrochloric acid - 7647-01-0	250 tonne TQ anhydrous 250 tonne TQ refrigerated liquid

National pollutant inventory
Subject to reporting requirement

Chemical name	National pollutant inventory
Hydrochloric acid - 7647-01-0	10 tonne/yr Threshold category 1 400 tonne/yr Threshold category 2a 1 tonne/h Threshold category 2a 2000 tonne/yr Threshold category 2b 60000 MWH Threshold category 2b 20 MW Threshold category 2b

International Inventories

AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.
TSCA	LGC, to the best of its ability, has confirmed that the chemical substances in this product are listed as “Active” in the EPA (Environmental Protection Agency) “TSCA Inventory Notification (Active-Inactive) Requirements Rule” (“the Final Rule”) of Feb 2019, as amended Feb 2021.”.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECI	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.

Legend:
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

Section 16: Any other relevant information

Revision date 24-Jul-2024

Revision Note

The symbol (*) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend
SVHC: Substances of Very High Concern for Authorisation:
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances
STOT: Specific Target Organ Toxicity

ATE: Acute Toxicity Estimate
LC50: 50% Lethal Concentration
LD50: 50% Lethal Dose

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation
C	Carcinogen		

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
Australian Industrial Chemicals Introduction Scheme (AICIS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Program
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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End of Safety Data Sheet