

This safety data sheet was created pursuant to the requirements of: OSHA HCS2012

Revision date 16-Apr-2024 Revision Number 1.01

1. Identification

Product identifier

Product Name Arsenic AA Standard: 1000 µg/mL As in 5% HNO3 [100ml bottle]

Other means of identification

Product Code(s) 5190-8260

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended use Reagents and Standards for Analytical Chemical Laboratory Use

Restrictions on use Not to be used for human or animal consumption

Details of the supplier of the safety data sheet

Supplier Address

Agilent Technologies, Inc. 5301 Stevens Creek Blvd Santa Clara, CA 95051, USA

800-227-9770

E-mail pdl-msds_author@agilent.com

Emergency telephone number

Emergency Telephone

CHEMTREC®: 1-800-424-9300

2. Hazard(s) identification

Classification

Classified according to OSHA.

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1A
Reproductive toxicity	Category 1A
Corrosive to metals	Category 1

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Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Danger

Hazard statements

Classified according to OSHA.
Causes skin irritation
Causes serious eye damage
May cause cancer
May damage fertility or the unborn child
May be corrosive to metals



Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/clothing and eye/face protection
Wash face, hands and any exposed skin thoroughly after handling
Keep only in original packaging

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

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 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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

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Other information

No information available.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Trade secret
Nitric Acid	7697-37-2	3 - <5	*
Arsenic	7440-38-2	0.1 - 1	*

Additional information

The concentration of the acid stated in this SDS is calculated as an absolute mass concentration (%w/v). This is less than the acid concentration stated on the product label and COA, which reflects a percent value of the commercially available concentrated aqueous form of the acid.

4. First-aid measures

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is

required. IF exposed or concerned: Get medical advice/attention.

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 immediate medical attention.

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 physician.

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 Burning sensation.

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Indication of any immediate medical attention and special treatment needed

Note to physiciansTreat symptomatically.

5. Fire-fighting measures

surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing mediaDo not scatter spilled material with high pressure water streams.

Specific hazards arising from the

chemical

No information available.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment and

precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Use personal protection equipment.

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.

Methods and material for containment and cleaning up

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

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. Handling and storage

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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. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse.

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.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Nitric Acid	TWA: 2 ppm	TWA: 2 ppm	IDLH: 25 ppm
7697-37-2	STEL: 4 ppm	TWA: 5 mg/m ³	TWA: 2 ppm
		(vacated) TWA: 2 ppm	TWA: 5 mg/m ³
		(vacated) TWA: 5 mg/m ³	STEL: 4 ppm
		(vacated) STEL: 4 ppm	STEL: 10 mg/m ³
		(vacated) STEL: 10 mg/m ³	
Arsenic	TWA: 0.01 mg/m ³	(vacated) TWA: 0.5 mg/m ³	IDLH: 5 mg/m ³
7440-38-2			Ceiling: 0.002 mg/m³ 15 min

Biological occupational exposure limits

Chemical name	ACGIH
Arsenic	35 μg As/L - urine (Inorganic arsenic plus methylated
7440-38-2	metabolites) - end of workweek

Appropriate engineering controls

Engineering controls

Showers

Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

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Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles). Tight sealing

safety goggles.

Hand protection The protective gloves to be used must comply with the specifications of EC Directive

89/686/EEC and the related standard EN374. Wear protective Neoprene™ gloves. Wear

suitable gloves. Impervious gloves.

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

Respiratory protection No protective equipment is needed under normal use conditions. 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.

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. Wash

hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
Appearance Liquid
Color colorless

Odor No information available
Odor threshold No information available

<u>Property</u> <u>Values</u> <u>Remarks • Method</u>

No data available None known Melting point / freezing point No data available None known Initial boiling point and boiling rangeNo data available None known Flash point No data available None known **Evaporation rate** No data available None known No data available **Flammability** None known Flammability Limit in Air None known

Upper flammability or explosive No data available

limits

Lower flammability or explosive No data available

limits

Vapor pressureNo data availableNone knownRelative vapor densityNo data availableNone knownRelative densityNo data availableNone knownWater solubilityNo data availableNone known

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Solubility(ies) No data available None known Partition coefficient No data available None known **Autoignition temperature** No data available None known **Decomposition temperature** None known Kinematic viscosity No data available None known **Dynamic viscosity** No data available None known

Other information

Explosive properties
Oxidizing properties
No information available
VOC content
No information available
Liquid Density
No information available
Bulk density
No information available

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

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

Incompatible materials Oxidizing agent. Strong acids. Strong bases.

Hazardous decomposition products None known based on information supplied.

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 damage.

May cause irreversible damage to eyes.

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

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gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

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

Acute toxicity

Numerical measures of toxicity

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

ATEmix (oral) 100,000.00 mg/kg
ATEmix (dermal) 99,999.00 mg/kg
ATEmix (inhalation-gas) 99,999.00 ppm
ATEmix (inhalation-dust/mist) 501.000 mg/l
ATEmix (inhalation-vapor) 58.90 mg/l

Component Information

Component intermation			
Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Nitric Acid	-	-	= 2500 ppm (Rat) 1 h
7697-37-2			ATE (vapours) = 2.65 mg/L
Arsenic	= 15 mg/kg (Rat)	-	-
7440-38-2			

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 burns. Causes serious eye

damage.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Contains a known or suspected carcinogen. Classification based on data available for

ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Arsenic 7440-38-2	A1	Group 1	Known	Х

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Legend

ACGIH (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen

IARC (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP (National Toxicology Program)

Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

Reproductive toxicity Contains a known or suspected reproductive toxin. Classification based on data available

for ingredients. May damage fertility or the unborn child.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target organ effects Respiratory system, Eyes, Skin, Teeth.

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

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

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Component Information

Chemical name Partition coefficient

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-2.3

Nitric Acid

Other adverse effects No information available.

7697-37-2

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 reuse empty containers.

This product contains one or more substances that are listed with the State of California as California Hazardous Waste Status

a hazardous waste.

14. Transport information

DOT

UN number or ID number UN3264

Extended proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid)

Transport hazard class(es) Packing group

Reportable Quantity (RQ) (Nitric Acid: RQ (kg)= 454.00, Arsenic: RQ (kg)= 0.45) Nitric Acid: RQ (lb)= 1000.00,

Arsenic: RQ (lb)= 1.00

Reportable quantity (kg)

(calculated) Reportable quantity (lbs) Nitric Acid: RQ (kg)= 10088.89, Arsenic: RQ (kg)= 454.00

Nitric Acid: RQ (lb)= 22222.00, Arsenic: RQ (lb)= 1000.00

(calculated)

Special Provisions IB3, T7, TP1, TP28

DOT Marine Pollutant NΡ

Description UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid), 8, III

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Emergency Response Guide

Number

TDG

UN number or ID number UN3264

UN proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid)

Transport hazard class(es) Packing group Ш **Special Provisions** 16 Marine pollutant NΡ

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Description UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid), 8, III

MEX

UN3264 **UN** number or ID number

UN proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid)

Transport hazard class(es) **Packing group** Ш

Technical Name Nitric Acid

Description UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid), 8, III

Special Provisions 223, 274

IATA

UN number or ID number UN3264

UN proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid)

Transport hazard class(es) Packing group Ш

Technical Name Nitric Acid

Description UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid), 8, III

Special Provisions A3, A803 **ERG** Code 8L

IMDG Not regulated

UN number or ID number UN3264

UN proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid)

Transport hazard class(es) Packing group Ш F-A, S-B EmS-No. **Special Provisions** 223, 274 Marine pollutant NP

Description UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Nitric Acid), 8, III

15. Regulatory information

International Inventories

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.".

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
Nitric Acid	7697-37-2	Present	Active
Arsenic	7440-38-2	Present	Active

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DSL/NDSL

EINECS/ELINCS

ENCS

Contact supplier for inventory compliance status.

KECL

Contact supplier for inventory compliance status.

PICCS Contact supplier for inventory compliance status.

Legend:

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

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical name	SARA 313 - Threshold Values %	
Nitric Acid - 7697-37-2	1.0	
Arsenic - 7440-38-2	0.1	

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous
	Quantities			Substances
Nitric Acid 7697-37-2	1000 lb	-	-	Х
Arsenic 7440-38-2	-	X	X	-

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CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous	Reportable Quantity (RQ)
		Substances RQs	
Nitric Acid	1000 lb	1000 lb	RQ 1000 lb final RQ
7697-37-2			RQ 454 kg final RQ
Arsenic	1 lb	-	RQ 1 lb final RQ
7440-38-2			RQ 0.454 kg final RQ

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	Х
Nitric Acid 7697-37-2	X	X	X
Arsenic 7440-38-2	X	X	Х

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA Health hazards 3 Flammability 0 Instability 0 Special hazards - HMIS Health hazards 3 * Flammability 0 Physical hazards 0 Personal protection X

Chronic Hazard Star Legend *= Chronic Health Hazard

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

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

Key literature references and sources for data used to compile the SDS

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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)

Japan GHS Classification

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

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)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

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Revision Note No information available.

Disclaimer

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

End of Safety Data Sheet

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