

Safety Data Sheet

according to HPR, Schedule 1

Printing date 07/04/2024

Version Number 7

Reviewed on 07/04/2024

1 Identification

- **Product identifier**
- **Trade name:** ICP-MS Calibration Standard (125 mL)
- **Part number:** IMS-104
- **Application of the substance / the mixture** Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies, Inc.
5301 Stevens Creek Blvd.
Santa Clara, CA 95051 USA
- **Information department:**
Telephone: 800-227-9770
e-mail: pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: 1-800-424-9300

2 Hazard identification

- **Classification of the substance or mixture**
The product is not classified, according to the Globally Harmonized System (GHS).

- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

3 Composition/Information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

7664-39-3	hydrogen fluoride	≤0.1% w/w
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4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.

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- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

* 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

* 8 Exposure controls/ Personal protection

- **Additional information about design of technical systems:** No further data; see section 7.

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· Control parameters
· Components with limit values that require monitoring at the workplace:
7664-39-3 hydrogen fluoride

EL	Ceiling: 2 ppm Skin
EV	TWA: 0.5 ppm Ceiling: 2 ppm as F

· Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls
· Personal protective equipment:
· General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

· Breathing equipment:

When used as intended with Agilent instruments, the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device/equipment with appropriate organic or acid gas cartridge.

· Protection of hands:

Although not recommended for constant contact with the chemicals or for clean-up, nitrile gloves 11-13 mil thickness are recommended for normal use. The breakthrough time is 1 hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15 mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· Material of gloves

For normal use: nitrile rubber, 11-13 mil thickness

For direct contact with the chemical: butyl rubber, 12-15 mil thickness

· Penetration time of glove material

For normal use: nitrile rubber: 1 hour

For direct contact with the chemical: butyl rubber: >4 hours

· Eye protection: Goggles recommended during refilling.

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
· Appearance:

Form:	Fluid
Color:	Colorless

· Odor:	Odorless
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· Odor threshold:	Not determined.
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· pH-value:	Not determined.
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· Change in condition

Melting point/Melting range:	0 °C
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Boiling point/Boiling range:	100 °C
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· Flash point:	Not applicable.
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· Flammability (solid, gaseous):	Not applicable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20 °C:	23 hPa
· Density at 20 °C:	1 g/cm ³
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic at 20 °C:	0.952 mPas
Kinematic:	Not determined.
· Solvent content:	
Water:	99.8 %
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:		
ATE (Acute Toxicity Estimate)		
Oral	LD50	1,276,000 mg/kg (rat)
Dermal	LD50	5,000 mg/kg
Inhalative	LC50/4 h	500 mg/L

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7664-39-3 hydrogen fluoride

Oral	LD50	1,276 mg/kg (rat)
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· Primary irritant effect:
· on the skin: No irritant effect.

· on the eye: No irritating effect.

· Sensitization: No sensitizing effects known.

· Additional toxicological information:

The product is not subject to classification according to internally approved calculation methods for preparations: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· Carcinogenic categories
· IARC (International Agency for Research on Cancer)

1313-27-5	molybdenum trioxide	2B
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· NTP (National Toxicology Program)

None of the ingredients is listed.

12 Ecological information

· Toxicity
· Aquatic toxicity: No further relevant information available.

· Persistence and degradability No further relevant information available.

· Behavior in environmental systems:
· Bioaccumulative potential No further relevant information available.

· Mobility in soil No further relevant information available.

· Additional ecological information:
· General notes: Not hazardous for water.

· Results of PBT and vPvB assessment
· PBT: Not applicable.

· vPvB: Not applicable.

· Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods
· Recommendation: Smaller quantities can be disposed of with household waste.

· Uncleaned packagings:
· Recommendation: Disposal must be made according to official regulations.

14 Transport information

· UN-Number
· DOT/TDG, ADR, ADN, IMDG, IATA not regulated

· UN proper shipping name
· DOT/TDG, ADR, ADN, IMDG, IATA not regulated

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· Transport hazard class(es)	
· DOT/TDG, ADR, ADN, IMDG, IATA	
· Class	not regulated
· Packing group	
· DOT/TDG, ADR, IMDG, IATA	not regulated
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	not regulated

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

· **Sara**

· **Section 355 (extremely hazardous substances):**

7664-39-3	hydrogen fluoride
7697-37-2	nitric acid

· **Section 313 (Specific toxic chemical listings):**

7664-39-3	hydrogen fluoride
7697-37-2	nitric acid
7783-20-2	ammonium sulfate
1313-27-5	molybdenum trioxide

· **TSCA (Toxic Substances Control Act):**

7732-18-5	water	ACTIVE
7664-39-3	hydrogen fluoride	ACTIVE
7697-37-2	nitric acid	ACTIVE
16919-19-0	alkali fluorosilicates (NH ₄)	ACTIVE
10043-35-3	boric acid	ACTIVE
7783-20-2	ammonium sulfate	ACTIVE
16962-40-6	ammonium hexafluorotitanate	ACTIVE
7722-76-1	ammonium dihydrogenorthophosphate	ACTIVE
1313-27-5	molybdenum trioxide	ACTIVE
1313-96-8	niobium (V) oxide	ACTIVE
1310-53-8	germanium dioxide	ACTIVE
7440-15-5	rhenium	ACTIVE
7440-25-7	tantalum	ACTIVE

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· Canadian substance listings:
· Canadian Domestic Substances List (DSL)

7732-18-5	water
7664-39-3	hydrogen fluoride
7697-37-2	nitric acid
16919-19-0	alkali fluorosilicates (NH ₄)
10043-35-3	boric acid
7783-20-2	ammonium sulfate
7722-76-1	ammonium dihydrogenorthophosphate
1313-27-5	molybdenum trioxide
1313-96-8	niobium (V) oxide
7440-15-5	rhenium
7440-25-7	tantalum

· Canadian Non-Domestic Substances List (NDSL)

16962-40-6	ammonium hexafluorotitanate
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· Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients is listed.

· Canadian Ingredient Disclosure list (limit 1%)

None of the ingredients is listed.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

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.

- **Department issuing SDS:** Document Control / Regulatory
- **Contact:** pdl-acg-regulatory-cq@agilent.com
- **Date of the latest revision of the safety data sheet** 07/04/2024 / 6
- **Abbreviations and acronyms:**
 - IMDG: International Maritime Code for Dangerous Goods
 - DOT: US Department of Transportation
 - IATA: International Air Transport Association
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - ELINCS: European List of Notified Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - NFPA: National Fire Protection Association (USA)
 - HMIS: Hazardous Materials Identification System (USA)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
- *** Data compared to the previous version altered.**