

Safety Data Sheet

according to P.U.(A) 310/2013

Printing date 23.03.2025

Revision: 23.03.2025

1 Identification of the hazardous chemical and of the supplier

- **Product identifier**
- **Trade name:** ICP-MS Calibration Standard (125 mL)
- **Part number:** IMS-104
- **Recommended use of the chemical and restrictions on use**
Reagents and Standards for Analytical Chemical Laboratory Use
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies Deutschland GmbH
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **Emergency telephone number:** CHEMTREC®: +(60) 3-9212 5794



2 Hazard identification

- **Classification of the substance or mixture**
The product is not classified, according to the Globally Harmonised System (GHS).
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition and information of the ingredients of the hazardous chemical

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

· **Dangerous components:**

7664-39-3	hydrogen fluoride	0.1%
	 Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330;  Skin Corr. 1A, H314; Eye Dam. 1, H318	

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

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

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- **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 extinguishing methods suitable to surrounding conditions.
- **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 fire - and explosion protection:** 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 and personal protection

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

 · **Ingredients with limit values that require monitoring at the workplace:**
7664-39-3 hydrogen fluoride

PEL (Malaysia)	Ceiling limit: 2.3 mg/m ³ , 3 ppm sebagai F
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- **Additional information:** The lists valid during the making were used as basis.

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- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

- **Respiratory protection:**

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 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil 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

Colour: Colourless

- **Odour:** Odourless

- **Odour threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/freezing point 0 °C

Initial boiling point and boiling range 100 °C

- **Flash point:** Not applicable.

- **Flammability (solid, gas)** Not applicable.

- **Decomposition temperature:** Not determined.

- **Auto-ignition temperature** Product is not selfigniting.

- **Explosive properties:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

- **Vapour pressure at 20 °C:** 23 hPa

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· Density at 20 °C:	1 g/cm ³
· Relative density	Not determined.
· Vapour 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 %
VOC (EC)	0.00 %
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 relevant for classification:
ATE (Acute Toxicity Estimates)

Oral	LD50	1,276,000 mg/kg (rat)
Dermal	LD50	5,000 mg/kg
Inhalative	LC50/4 h	500 mg/L

7664-39-3 hydrogen fluoride

Oral	LD50	1,276 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion or irritation** No irritant effect.
- **Serious eye damage or eye irritation** No irritating effect.
- **Respiratory / skin sensitization** No sensitising effects known.

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· **Additional toxicological information:**

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour 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 information

- **Waste treatment methods**
- **Recommendation** Smaller quantities can be disposed of with household waste.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transportation information

<ul style="list-style-type: none"> · UN-Number · ADR, ADN, IMDG, IATA 	not regulated
<ul style="list-style-type: none"> · UN proper shipping name · ADR, ADN, IMDG, IATA 	not regulated
<ul style="list-style-type: none"> · Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class 	not regulated
<ul style="list-style-type: none"> · Packing group · ADR, IMDG, IATA 	not regulated
<ul style="list-style-type: none"> · Environmental hazards: 	Not applicable.
<ul style="list-style-type: none"> · Special precautions for user 	Not applicable.
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of Marpol and the IBC Code 	Not applicable.

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· UN "Model Regulation": not regulated

15 Regulatory information

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

· EHS reference list

7664-39-3 | hydrogen fluoride

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I 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

· Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

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)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 2: Acute toxicity - oral - Category 2

Acute Tox. 1: Acute toxicity - oral - Category 1

Skin Corr. 1A: Skin corrosion or irritation - Category 1A

Eye Dam. 1: Serious eye damage or eye irritation - Category 1

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