

*acc. to OSHA HCS*

Printing date 04/08/2021

Review date 04/08/2021

**1 Identification**

- **Product identifier**
- **Trade name:** STD, Niobium, 1000 ppm
- **Article number** N9303786
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**

PerkinElmer, Inc.  
710 Bridgeport Avenue  
Shelton, Connecticut 06484 USA  
CustomerCareUS@perkinelmer.com  
203-925-4600

- **Emergency telephone number:**  
CHEMTREC (within US) 800-424-9300  
CHEMTREC (from outside US) +1 703-527-3887 (call collect)  
CHEMTREC (within AU) +(61)-290372994

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



Acute Tox. 4 H302 Harmful if swallowed.  
Acute Tox. 4 H312 Harmful in contact with skin.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS07
- **Signal word** Warning

- **Hazard-determining components of labeling:**  
Hydrofluoric acid
- **Hazard statements**  
H302+H312 Harmful if swallowed or in contact with skin.

- **Precautionary statements**  
P264 Wash thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves / protective clothing.  
P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.  
P330 Rinse mouth.  
P302+P352 If on skin: Wash with plenty of water.  
P321 Specific treatment (see on this label).  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



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

HEALTH	1	Health = 1
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

- **Other hazards**

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **CAS No. Description**

7732-18-5 Water

- **EC number:** 231-791-2

- **Chemical characterization:** Mixtures

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

- **Hazardous components:**

7664-39-3	Hydrofluoric acid	0.4%
	☠ Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330	
	☠ Skin Corr. 1A, H314	

- **Additional Components**

7732-18-5	Water	99.5%
7440-03-1	niobium	0.1%

### 4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:**

Immediately rinse with water.

Rub in Ca-gluconate solution or Ca-gluconate gel immediately.

- **After eye contact:** Rinse opened eye for several minutes under running water.

- **After swallowing:** Immediately call a doctor.

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- **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:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.
- **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.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

7440-03-1	niobium	30 mg/m <sup>3</sup>
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· **PAC-2:**

7440-03-1	niobium	330 mg/m <sup>3</sup>
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· **PAC-3:**

7440-03-1	niobium	2,000 mg/m <sup>3</sup>
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**7 Handling and storage**

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** The product is not flammable.
- **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.

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· **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 item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**7664-39-3 Hydrofluoric acid**

PEL	Long-term value: 1* mg/m <sup>3</sup> , 3 ppm as F, *sulfuric acid
REL	Long-term value: 2.5 mg/m <sup>3</sup> , 3 ppm Ceiling limit value: 5* mg/m <sup>3</sup> , 6* ppm *15-min, as F
TLV	Long-term value: 0.41 mg/m <sup>3</sup> , 0.5 ppm Ceiling limit value: 1.64 mg/m <sup>3</sup> , 2 ppm as F; Skin; BEI

· **Ingredients with biological limit values:**

**7664-39-3 Hydrofluoric acid**

BEI	3 mg/g creatinine Medium: urine Time: prior to shift Parameter: Flourides (background)
	10 mg/g creatinine Medium: urine Time: end of shift Parameter: Flourides (background)

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

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.

· **Breathing equipment:** Not required.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Goggles recommended during refilling.

**9 Physical and chemical properties**

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· <b>Form:</b>	Liquid
· <b>Color:</b>	Transparent
· <b>Odor:</b>	Odorless
· <b>Odor threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· <b>Melting point/Melting range:</b>	0 °C (32 °F)
· <b>Boiling point/Boiling range:</b>	100 °C (212 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.  
Not determined.

· **Explosion limits:**

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

· **Vapor pressure at 20 °C (68 °F):** 23 hPa (17.3 mm Hg)

· **Density at 20 °C (68 °F):** 1 g/cm<sup>3</sup> (8.345 lbs/gal)

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

· **Water:** Fully miscible.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

· **Dynamic:** Not determined.

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<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Water:</b>	99.5 %
<b>VOC content:</b>	0.00 %
· <b>Other information</b>	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:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:** Harmful
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

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.

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- **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:**  
Dispose of container and materials in accordance with local, regional and national regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

**14 Transport information**

· <b>UN-Number</b>	Void
· <b>DOT, ADR, ADN, IMDG, IATA</b>	Void
· <b>UN proper shipping name</b>	Void
· <b>DOT, ADR, ADN, IMDG, IATA</b>	Void
· <b>Transport hazard class(es)</b>	Void
· <b>DOT, ADR, ADN, IMDG, IATA</b>	Void
· <b>Class</b>	Void
· <b>Packing group</b>	Void
· <b>DOT, ADR, IMDG, IATA</b>	Void
· <b>Environmental hazards:</b>	No
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	Non regulated according to above specifications. Void

**15 Regulatory information**

· <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>		
7732-18-5	Water	99.5%
7664-39-3	Hydrofluoric acid	0.4%
	 Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330  Skin Corr. 1A, H314	
7440-03-1	niobium	0.1%

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· **Sara**

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

All ingredients are listed.

7732-18-5	Water	ACTIVE
7440-03-1	niobium	ACTIVE

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to this hazardous material. Exceptions can be made by the authorities in certain cases.

· **Water hazard class:** Generally not hazardous for water.

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

**16 Other information**

**Disclaimer**

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that

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*these are the only hazards which exist. PerkinElmer shall not be held liable for any damage resulting from handling or from contact with the product.*

· **Department issuing SDS:** Environmental, Health and Safety

· **Contact:**

*Within the USA: 1-(800)-762-4000*

*Outside the USA: 1-(203)-712-8488*

· **Abbreviations and acronyms:**

*RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)*

*ICAO: International Civil Aviation Organisation*

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*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)*

*VOC: Volatile Organic Compounds (USA, EU)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*NIOSH: National Institute for Occupational Safety*

*OSHA: Occupational Safety & Health*

*TLV: Threshold Limit Value*

*PEL: Permissible Exposure Limit*

*REL: Recommended Exposure Limit*

*BEI: Biological Exposure Limit*

*Acute Tox. 2: Acute toxicity – Category 2*

*Acute Tox. 4: Acute toxicity – Category 4*

*Acute Tox. 1: Acute toxicity – Category 1*

*Skin Corr. 1A: Skin corrosion/irritation – Category 1A*

· **\* Data compared to the previous version altered.**