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SECTION 1: Identification of the substance/mixture and of the comp	oany/undertaking
1.1 Product identifier	
Trade name: STD, Niobium, 1000 ppm	
Article number: N9303786	
1.2 Relevant identified uses of the substance or mixture and uses advised against	
No further relevant information available.	
Application of the substance / the mixture Laboratory chemicals	
1.3 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 Deubic Fluence, Luc	
PerkinElmer, Inc. Chalfort Poad Pushinghamahing	
Chalfont Road Buckinghamshire Seer Green HP9 2FX	
cc.uk@perkinelmer.com	
United Kingdom	
P: 0800 896 046	
F: 0800-89 17 14	
PerkinElmer, Inc.	
Llantrisant Business Park, Unit A	
Llantrisant CF72 8YW	
United Kingdom	
cc.uk@perkinelmer.com	
P: 44 1443 234005	
1.4 Emergency telephone number:	
CHEMTREC (within US) 800-424-9300	
CHEMTREC (from outside US) +1 703-527-3887 (call collect)	
CHEMTREC (within AU) +(61)-290372994	
SECTION 2: Hazards identification	
2.1 Classification of the substance or mixture	
Classification according to Regulation (EC) No 1272/2008	
GHS07	
Acute Tox. 4 H302 Harmful if swallowed.	
Acute Tox. 4 H312 Harmful in contact with skin.	
2.2 Label elements	
Labelling according to Regulation (EC) No 1272/2008	
The product is classified and labelled according to the CLP regulation.	
Hazard pictograms GHS07	
Signal word Warning	(Contd. on page 2



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· Hazard-determining components of labelling: *Hydrofluoric acid* · Hazard statements H302+H312 Harmful if swallowed or in contact with skin. · Precautionary statements P280 Wear protective gloves / protective clothing. P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. P330 Rinse mouth. 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. 2.3 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.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

• Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

	Hydrofluoric acid	0.4%
EINECS: 231-634-8	Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330 Skin Corr. 1A, H314	
	Skin Corr. 1A, H314	
· Additional Compone	ents	
CAS: 7732-18-5	Water	99.5%
EINECS: 231-791-2		
CAS: 7440-03-1	niobium	0.1%
EINECS: 231-113-5		

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

SECTION 4: First aid measures

• 4.1 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: Call for a doctor immediately.

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- 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available. • 4.3 Indication of any immediate medical attention and special treatment needed
- No further relevant information available.

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.
- 5.2 Special hazards arising from the substance or mixture No further relevant information available.
- 5.3 Advice for firefighters
- · Protective equipment: No special measures required.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures Not required.
- 6.2 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.

• 6.3 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.

· 6.4 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.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling No special precautions are necessary if used correctly. • Information about fire - and explosion protection: The product is not flammable.
- · 7.2 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.
- · 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

• Additional information about design of technical facilities: No further data; see item 7.

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· Change in condition

· Flammability (solid, gas):

· Flash point:

Melting point/freezing point:

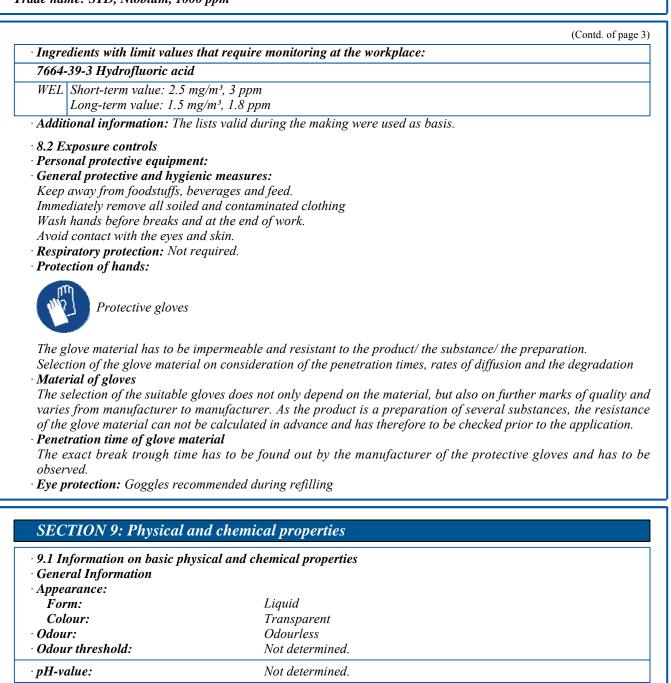
Initial boiling point and boiling range: 100 °C

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Not applicable.

Not applicable.



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· Decomposition temperature:	Not determined.	
• Auto-ignition temperature:	Product is not selfigniting.	
· Explosive properties:	Product does not present an explosion hazard. Not determined.	
· Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
· Vapour pressure at 20 °C:	23 hPa	
· Density at 20 °C:	$l g/cm^3$	
· Relative density	Not determined.	
· Vapour 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.	
Kinematic:	Not determined.	
· Solvent content:		
Water:	99.5 %	
· 9.2 Other information	No further relevant information available.	

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

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

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity

Harmful if swallowed or in contact with skin.

• Primary irritant effect:

- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation Based on available data, the classification criteria are not met.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

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• Additional toxicological information:

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

· Germ cell mutagenicity Based on available data, the classification criteria are not met.

 \cdot Carcinogenicity Based on available data, the classification criteria are not met.

- *Reproductive toxicity Based on available data, the classification criteria are not met.*
- STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure Based on available data, the classification criteria are not met.

• Aspiration hazard Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity: No further relevant information available.

• 12.2 Persistence and degradability No further relevant information available.

- · 12.3 Bioaccumulative potential No further relevant information available.
- 12.4 Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes: Not hazardous for water.
- · 12.5 Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- vPvB: Not applicable.
- · 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

• Uncleaned packaging:

- Recommendation: Disposal must be made according to official regulations.
- Recommended cleansing agents: Water, if necessary together with cleansing agents.

· 14.1 UN-Number		
· ADR, ADN, IMDG, IATA	Void	
· 14.2 UN proper shipping name		
· ADR, ADN, IMDG, IATA	Void	
· 14.3 Transport hazard class(es)		
ADR, ADN, IMDG, IATA		
· Class	Void	
· 14.4 Packing group		
· ADR, IMDĞ, IATA	Void	



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· 14.5 Environmental hazards:		
Marine pollutant:	No	
14.6 Special precautions for user	Not applicable.	
14.7 Transport in bulk according to Ann	ex II of	
Marpol and the IBC Code	Not applicable.	
· UN "Model Regulation":	Non regulated according to above specifications. Void	

SECTION 15: R	egulatory information	
· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture		
CAS: 7732-18-5 EINECS: 231-791-2	Water	99.5%
CAS: 7664-39-3 EINECS: 231-634-8	Hydrofluoric acid Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330 Skin Corr. 1A, H314	0.4%
CAS: 7440-03-1 EINECS: 231-113-5	niobium	0.1%

· Directive 2012/18/EU

· Named dangerous substances - ANNEX I None of the ingredients is listed.

• REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

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.

• Waterhazard class: Generally not hazardous for water.

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

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

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(Contd. of page 7) · Relevant phrases H300 Fatal if swallowed. H310 Fatal in contact with skin. H314 Causes severe skin burns and eye damage. H330 Fatal if inhaled. · Department issuing SDS: Environmental, Health and Safety PerkinElmer Chalfont Road **Buckinghamshire** Seer Green HP9 2FX United Kingdom Telephone : 0800-89 60 46 FAX: 0800-89 17 14 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 IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals 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) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative 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.