

Safety Data Sheet

according to Regulation (EC) No 1907/2006

444-53 SPADNS Reagent Fluoride

Revision date: 27.11.2017

Product code: 44453

Page 1 of 9

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

444-53 SPADNS Reagent Fluoride

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Water analysis

1.3. Details of the supplier of the safety data sheet

Company name: HACH LANGE GmbH
Street: Willstätterstr. 11
Place: D-40549 Düsseldorf
Telephone: +49 (0)211 5288-383
e-mail: SDS@hach.com
Internet: www.de.hach.com
Responsible Department: HACH LANGE Ltd.
5, Pacific Way
Salford Manchester M50 1DL - United Kingdom
Tel. +44 (0) 161 872 1487 * Fax +44 (0) 161 848 7324
e-Mail: info-uk@hach.com

HACH LANGE Ltd.
Unit 1, Chestnut Road Western Industrial Estate
IRL-Dublin 12
Tel. +353 (0)1 4602522
e-Mail: info-ie@hach.com

1.4. Emergency telephone number:

Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service -

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Skin corrosion/irritation: Skin Corr. 1B

Serious eye damage/eye irritation: Eye Dam. 1

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Causes severe skin burns and eye damage.

Causes serious eye damage.

Harmful to aquatic life with long lasting effects.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

hydrochloric acid ... %

Signal word: Danger**Pictograms:**

Safety Data Sheet

according to Regulation (EC) No 1907/2006

444-53 SPADNS Reagent Fluoride

Revision date: 27.11.2017

Product code: 44453

Page 2 of 9

Hazard statements

- H314 Causes severe skin burns and eye damage.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.
P310 Immediately call a POISON CENTER/doctor.
P363 Wash contaminated clothing before reuse.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Additional advice on labelling

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7732-18-5	Water			>70 %
	231-791-2			
-	hydrochloric acid ... %			10-15 %
	231-595-7	017-002-01-X		
	Skin Corr. 1B, STOT SE 3; H314 H335			
23647-14-5	SPADNS			<0,5 %
	245-803-9			
7784-46-5	Sodium arsenite			<0,1 %
	232-070-5	033-002-00-5		
	Carc. 1A, Muta. 1B, Repr. 1B, Acute Tox. 3, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 1, STOT RE 1, Aquatic Acute 1 (M-Factor = 10), Aquatic Chronic 1 (M-Factor = 10); H350 H340 H360 H331 H301 H315 H319 H370 H372 H400 H410			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

- Take off all contaminated clothing immediately.
Consult a physician. Show this safety data sheet to the doctor in attendance.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

444-53 SPADNS Reagent Fluoride

Revision date: 27.11.2017

Product code: 44453

Page 3 of 9

After inhalation

Move to fresh air.

Consult a physician. Show this safety data sheet to the doctor in attendance.

After contact with skin

Wash off immediately with plenty of water for at least 15 minutes.

Consult a physician. Show this safety data sheet to the doctor in attendance.

After contact with eyes

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Show this safety data sheet to the doctor in attendance.

After ingestion

Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting.

Consult a physician. Show this safety data sheet to the doctor in attendance.

4.2. Most important symptoms and effects, both acute and delayed

Irritation and corrosion

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product itself does not burn.

5.2. Special hazards arising from the substance or mixture

Fire may liberate hazardous vapours. Gives off hydrogen by reaction with metals.

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

Additional information

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste.

6.4. Reference to other sections

13. Disposal considerations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use only in well-ventilated areas. Do not breathe vapours/dust.

Advice on protection against fire and explosion

See also section 5

Safety Data Sheet

according to Regulation (EC) No 1907/2006

444-53 SPADNS Reagent Fluoride

Revision date: 27.11.2017

Product code: 44453

Page 4 of 9

Further information on handling

Avoid contact with skin, eyes and clothing.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep tightly closed in a dry, cool and well-ventilated place. Protect against light.

7.3. Specific end use(s)

Reagent for analysis

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7647-01-0	Hydrogen chloride (gas and aerosol mists)	1	2		TWA (8 h)	WEL
		5	8		STEL (15 min)	WEL

Additional advice on limit values

None known.

8.2. Exposure controls**Appropriate engineering controls**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

Protective and hygiene measures

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Wash hands before breaks and after work.

Eye/face protection

Safety glasses with side-shields

Hand protection

Use barrier skin cream.

Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374. In full contact:

Gloves material: Viton, Layer thickness: 0.70 mm, Breakthrough time: >480 min. In splash contact: Glove

material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: > 30 min

Respiratory protection

Breathing apparatus only if aerosol or dust is formed. Recommended Filter type: ABEK-filter

Environmental exposure controls

Remove and wash contaminated clothing before re-use.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	dark red
Odour:	stinging
pH-Value (at 20 °C):	< 0,45

Changes in the physical state

Melting point:	no data available
Initial boiling point and boiling range:	105 °C

Safety Data Sheet

according to Regulation (EC) No 1907/2006

444-53 SPADNS Reagent Fluoride

Revision date: 27.11.2017

Product code: 44453

Page 5 of 9

Sublimation point: not applicable
Softening point: not applicable
Pour point: not applicable
Flash point: not applicable

Flammability

Solid: not applicable
Gas: not applicable

Explosive properties

not applicable

Lower explosion limits: not applicable
Upper explosion limits: not applicable
Ignition temperature: not applicable

Auto-ignition temperature

Solid: not applicable
Gas: not applicable

Decomposition temperature: not applicable

Oxidizing properties

not applicable

Vapour pressure: no data available

Density (at 20 °C): 1,015 g/cm³

Bulk density: not applicable

Water solubility: completely soluble
(at 20 °C)

Partition coefficient: no data available

Viscosity / dynamic: no data available

Viscosity / kinematic: no data available

Flow time: no data available

Vapour density: no data available

Evaporation rate: 0,64
(at 20 °C)

Solvent separation test: no data available

Solvent content: no data available

9.2. Other information

Solid content: no data available

SECTION 10: Stability and reactivity**10.1. Reactivity**

Corrosive to metals

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Reacts with the following substances: Bases, Metals

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

444-53 SPADNS Reagent Fluoride

Revision date: 27.11.2017

Product code: 44453

Page 6 of 9

10.5. Incompatible materials

Bases, Metals, Oxidizing agents

10.6. Hazardous decomposition products

Gives off hydrogen by reaction with metals. Heating can release hazardous gases.

SECTION 11: Toxicological information
11.1. Information on toxicological effects
Acute toxicity

LD50/oral/rat = 540 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
-	hydrochloric acid ... %				
	dermal	LD50 mg/kg	>5010		
7784-46-5	Sodium arsenite				
	oral	LD50	41 mg/kg	rat	
	dermal	LD50 mg/kg	150	rat	
	inhalation vapour	ATE	3 mg/l		
	inhalation aerosol	ATE	0,5 mg/l		

Irritation and corrosivity

Causes skin and eye burns.

Sensitising effects

No known effect.

Carcinogenic/mutagenic/toxic effects for reproduction

Contains no ingredient listed as a carcinogen

STOT-single exposure

No known effect.

STOT-repeated exposure

No known effect.

Aspiration hazard

No aspiration toxicity classification

Specific effects in experiment on an animal

No toxicology information is available.

Further information

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information
12.1. Toxicity

Do not flush into surface water or sanitary sewer system.

LC50/24h/goldfish = 178 mg/L

Safety Data Sheet

according to Regulation (EC) No 1907/2006

444-53 SPADNS Reagent Fluoride

Revision date: 27.11.2017

Product code: 44453

Page 7 of 9

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
-	hydrochloric acid ... %					
	Acute fish toxicity	LC50	862 mg/l	96 h	Leuciscus idus	
7784-46-5	Sodium arsenite					
	Acute algae toxicity	ErC50	0,07 mg/l			
	Acute crustacea toxicity	EC50	1,27 mg/l	48 h		

12.2. Persistence and degradability

No data is available on the product itself.

12.3. Bioaccumulative potential

No data is available on the product itself.

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

No known effect.

SECTION 13: Disposal considerations
13.1. Waste treatment methods
Advice on disposal

In accordance with local and national regulations.

Waste disposal number of waste from residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

Waste disposal number of used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

SECTION 14: Transport information
Land transport (ADR/RID)

- 14.1. UN number:** UN 1789
14.2. UN proper shipping name: Hydrochloric acid
14.3. Transport hazard class(es): 8
14.4. Packing group: II

Inland waterways transport (ADN)
Other applicable information (inland waterways transport)

Not tested

Marine transport (IMDG)

- 14.1. UN number:** UN 1789
14.2. UN proper shipping name: Hydrochloric acid
14.3. Transport hazard class(es): 8

Safety Data Sheet

according to Regulation (EC) No 1907/2006

444-53 SPADNS Reagent Fluoride

Revision date: 27.11.2017

Product code: 44453

Page 8 of 9

14.4. Packing group: II
Marine pollutant: --
EmS: F-A,S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1789
14.2. UN proper shipping name: Hydrochloric acid
14.3. Transport hazard class(es): 8
14.4. Packing group: II

14.6. Special precautions for user

no data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

Other applicable information

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit, Hazard Class: 9, UN Number 3316, Package group II, EMS Code: F-A, S-P
These transport data apply to the entire pack

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 19: Sodium arsenite

National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Changes**

Revision: 27.11.2017

Safety datasheet sections which have been updated: 2, 11

Revision: 04.05.2015

Safety datasheet sections which have been updated: 2, 11

Relevant H and EUH statements (number and full text)

H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H340 May cause genetic defects.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H370 Causes damage to organs.
H372 Causes damage to organs through prolonged or repeated exposure.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

444-53 SPADNS Reagent Fluoride

Revision date: 27.11.2017

Product code: 44453

Page 9 of 9

H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Further Information

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)