

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Hydrofluoric acid 0.1 mol/l - 0.1 M solution

Revision date: 23.02.2022

Product code: 18530

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Hydrofluoric acid 0.1 mol/l - 0.1 M solution

UFI: YW9N-V1N0-U006-6VEP

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

Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name:	Fa. Bernd Kraft GmbH	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
e-mail:	info@berndkraft.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
e-mail:	produktsicherheit@berndkraft.de	
Internet:	www.berndkraft.de	
Responsible Department:	Abteilung Produktsicherheit	

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

This product is a mixture. REACH Registration Number see section 3.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Signal word: Warning

Pictograms:



Hazard statements

H319 Causes serious eye irritation.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

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P337+P313 present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Additional advice on labelling

No information available.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixtures in aqueous solution

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7664-39-3	Hydrofluoric acid ... %			< 1 %
	231-634-8	009-003-00-1	01-2119458860-33	
	Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, Skin Corr. 1A; H310 H330 H300 H314			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
7664-39-3	231-634-8	Hydrofluoric acid ... %	< 1 %
		inhalation: ATE = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists); inhalation: LC50 = 1610 ppm (gases); dermal: ATE = 5 mg/kg Skin Corr. 1A; H314: >= 7 - 100 Skin Corr. 1B; H314: >= 1 - < 7 Eye Irrit. 2; H319: >= 0,1 - < 1	

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available

After inhalation

Provide fresh air.
Call a physician immediately.

After contact with skin

Wash immediately with: Water Take off immediately all contaminated clothing and wash it before reuse. Call a physician immediately.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.
Remove contact lenses, if present and easy to do. Continue rinsing. Protect uninjured eye.

After ingestion

Rinse mouth immediately and drink plenty of water.
Remove casualty to fresh air and keep warm and at rest.
Call a physician immediately.

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

Irritant

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible liquids

Hazardous combustion products

In case of fire may be liberated: Hydrogen fluoride

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

In case of fire and/or explosion do not breathe fumes. Use water spray jet to protect personnel and to cool endangered containers.

Additional information

Suppress gases/vapours/mists with water spray jet.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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Advice on safe handling

Read label before use. Handle and open container with care.
When using do not eat, drink, smoke, sniff. Keep container tightly closed.
Use personal protection equipment. Use extractor hood (laboratory).
Provide adequate ventilation.
Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs. Make available sufficient washing facilities
Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.
Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Further information on handling

Draw up and observe skin protection programme.
Wash hands and face before breaks and after work and take a shower if necessary.
Take off immediately all contaminated clothing and wash it before reuse.
If handled uncovered, arrangements with local exhaust ventilation have to be used.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.

Further information on storage conditions

Store in a dry place.
Suitable container/equipment material: plastic
Unsuitable container/equipment material: Metal Glass

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
7664-39-3	Hydrogen fluoride (as F)	1.8	1.5		TWA (8 h)	
		3	2.5		STEL (15 min)	

Biological limit values

CAS No	Substance	Parameter	Value	Test material	Sampling time
7664-39-3	Hydrogen fluoride	Fluoride	3 mg/L	Urine	End of shift

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.
Technical measures and the application of suitable work processes have priority over personal protection equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection:

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goggles
Face protection umbrella

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation: KCL 741 Dermatril® L
Recommended material: NBR (Nitrile rubber) 0,11 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 741 Dermatril® L
Recommended material: NBR (Nitrile rubber) 0,11 mm
Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet (>, <)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing.
Take off immediately all contaminated clothing.
Wash hands before breaks and after work.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless
Odour:	odourless
Odour threshold:	There are no data available on the mixture itself.

Changes in the physical state

Melting point/freezing point:	No data available
Boiling point or initial boiling point and boiling range:	No data available
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
No data available:	

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Flash point: X

Flammability

Solid/liquid: not applicable

Gas: not applicable

Explosive properties

No data available

Lower explosion limits: not determined

Upper explosion limits: not determined

Auto-ignition temperature: No data available

Self-ignition temperature

Solid: not applicable

Gas: not applicable

Decomposition temperature: not determined

pH-Value: acidic

Viscosity / dynamic: not determined

Viscosity / kinematic: not determined

Flow time: not determined

Water solubility: Soluble in: Water

Solubility in other solvents

not determined

Dissolution rate: No data available

Partition coefficient n-octanol/water: not determined

Dispersion stability: No data available

Vapour pressure: not determined

Vapour pressure: not determined

Density: 1,0007 g/cm³

Bulk density: No data available

Relative vapour density: not determined

Particle characteristics: No data available

9.2. Other information

Information with regard to physical hazard classes

Sustaining combustion: No data available

Oxidizing properties

Not oxidising.

Other safety characteristics

Solvent separation test: No data available

Solvent content: No data available

Solid content: not determined

Evaporation rate: not determined

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

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10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Metal
Glass

10.6. Hazardous decomposition products

In case of fire:
SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicokinetics, metabolism and distribution

No data available

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7664-39-3	Hydrofluoric acid ... %				
	oral	ATE 5 mg/kg			
	dermal	ATE 5 mg/kg			
	inhalation vapour	ATE 0,5 mg/l			
	inhalation dust/mist	ATE 0,05 mg/l			
	inhalation (1 h) gas	LC50 1610 ppm	Rat		

Irritation and corrosivity

Causes serious eye irritation.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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.
No data available

Specific effects in experiment on an animal

No data available

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Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information

No data available

Further information

No data available

SECTION 12: Ecological information

12.1. Toxicity

No information available.

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

No information available.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

No information available.

12.7. Other adverse effects

No information available.

Further information

Avoid release to the environment.

Do not allow to enter into surface water or drains.

Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Send to a physico-chemical treatment facility under observation of official regulations.

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Do not allow to enter into surface water or drains.

Contaminated packaging

This material and its container must be disposed of as hazardous waste.

Handle contaminated packages in the same way as the substance itself.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

Land transport (ADR/RID)

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- | | |
|---|--|
| <u>14.1. UN number or ID number:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.2. UN proper shipping name:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.3. Transport hazard class(es):</u> | No dangerous good in sense of this transport regulation. |
| <u>14.4. Packing group:</u> | No dangerous good in sense of this transport regulation. |

Inland waterways transport (ADN)

- | | |
|---|--|
| <u>14.1. UN number or ID number:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.2. UN proper shipping name:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.3. Transport hazard class(es):</u> | No dangerous good in sense of this transport regulation. |
| <u>14.4. Packing group:</u> | No dangerous good in sense of this transport regulation. |

Marine transport (IMDG)

- | | |
|---|--|
| <u>14.1. UN number or ID number:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.2. UN proper shipping name:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.3. Transport hazard class(es):</u> | No dangerous good in sense of this transport regulation. |
| <u>14.4. Packing group:</u> | No dangerous good in sense of this transport regulation. |

Air transport (ICAO-TI/IATA-DGR)

- | | |
|---|--|
| <u>14.1. UN number or ID number:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.2. UN proper shipping name:</u> | No dangerous good in sense of this transport regulation. |
| <u>14.3. Transport hazard class(es):</u> | No dangerous good in sense of this transport regulation. |
| <u>14.4. Packing group:</u> | No dangerous good in sense of this transport regulation. |

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: Toxic. strongly corrosive.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

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 3, Entry 75

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Water hazard class (D): - - non-hazardous to water

15.2. Chemical safety assessment

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

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,4,9,11,12,13.

Abbreviations and acronyms

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 Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances

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CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Eye Irrit. 2; H319	Calculation method

Relevant H and EUH statements (number and full text)

H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

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