

Revised on: 07.11.2019

Sodium fluoride p.A.

Created on: 07.11.2019

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: Sodium fluoride p.A.

Article number: LC-7874

CAS Number: 7681-49-4

Registration number: 01-2119539420-47-XXXX

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

Identified uses:

Pharmaceutical production, Cosmetic raw material

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier:

neoFroxx GmbH

Marie-Curie-Str. 3

D-64683 Einhausen

info@neofroxx.com

Further information obtainable from:

Dep. Quality Control

1.4. Emergency telephone number

+49 (6251) 989 24 - 0 (during normal business hours)

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:

Acute toxicity, Category 3, Oral, H301

Skin irritation, Category 2, H315

Eye irritation, Category 2, H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:

Hazard pictograms:



Signal word: Danger

Hazard statements:

H301 Toxic if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

EUH032 Contact with acids liberates very toxic gas.

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Precautionary statements:

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Index-No.: 009-004-00-7

2.3. Other hazards

None known.

3. Composition / information on ingredients

3.1. Substance

Formula: NaF FNa (Hill)

Index-No.: 009-004-00-7

EC-No.: 231-667-8

Molar mass: 41,98 g/mol

Hazardous components (REGULATION (EC) No 1272/2008):

Chemical Name (Concentration):

sodium fluoride (<= 100 %)

CAS-No.:

7681-49-4

Registration number:

01-2119539420-47-XXXX

Classification:

Acute toxicity, Category 3, H301

Skin irritation, Category 2, H315

Eye irritation, Category 2, H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

3.2. Mixture

Not applicable

4. First aid measures

4.1. Description of first aid measures

General advice:

Countermeasurements must be implemented at once.

After inhalation: fresh air.

After contact with skin: Rinse with plenty of water for at least 10 minutes. Immediately remove contaminated clothes. Apply calcium gluconate gel (preparation: boil 5 g of calcium gluconate in 85 ml of hot distilled water, add 10 g glycerol. Allow 5 g of Carmellose-sodium to swell in the hot solution. Stable for 6 months, store in a cool place) and massage into the skin until the pain subsides, in between rinse with water and apply fresh gel. Continue gel therapy for another 15 minutes after the pain has subsided. If no calcium gluconate gel is available, apply several dressings thoroughly moistened with 20 % calcium gluconate solution. Medical advice absolutely required!

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

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After swallowing: Immediately give to drink plenty of water, add calcium (in the form of calcium gluconate or calcium lactate). Caution: In the case of vomiting risk of perforation! Administer more calcium gluconate solution. Laxative: Sodium sulfate (1 tablespoon/1/4 l water). Seek medical advice immediately. Ensure that injured persons remain calm and protect them against heat loss.

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

Risk of corneal clouding.

The following applies to soluble inorganic fluorides in general: may cause irritations to burns in contact with eyes, skin, mucous membranes. Systemic effect: drop in blood calcium level, agitation, spasms, cardiovascular disorders, CNS disorders.

Irritation and corrosion, Cough, respiratory arrest, Convulsions, Nausea, Unconsciousness, death

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

Note for the doctor: It is recommended to consult a doctor with experience in the treatment of lesions caused by hydrofluoric acid. If a systemic effect is suspected, monitoring and treatment in an intensive care unit is urgently required. Caution, ventricular fibrillation due to electrolyte imbalance.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media:

For this substance/mixture no limitations of extinguishing agents are given.

5.2. Special hazards arising from the substance or mixture

Non-combustible.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of:

Hydrogen fluoride

5.3. Advice for firefighters

Special protective equipment for firefighters:

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information:

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

6.2. Environmental precautions

Do not let product enter drains.

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6.3. Methods and material for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4. Reference to other sections
Indications about waste treatment see section 13.

7. Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

Observe label precautions.

Hygiene measures:

Change contaminated clothing. Wash hands after working with substance.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions:

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons.

Recommended storage temperature: see product label.

7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. Exposure controls / personal protection

8.1. Control parameters

8.2. Exposure controls

Engineering measures:

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

See section 7.1.

Individual protection measures:

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection:

Safety glasses

Hand protection:

full contact:

Glove material: Nitrile rubber

Glove thickness: 0,11 mm

Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber

Glove thickness: 0,11 mm

Break through time: > 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

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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).

Other protective equipment:

protective clothing

Respiratory protection:

required when dusts are generated.

Recommended Filter type: Filter B-(P3)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls:

Do not let product enter drains.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form: crystals

Colour: colourless

Odour: odourless

Odour Threshold: Not applicable

pH: ca. 10,2 at 40 g/l 20 °C

Melting point: 996 °C at 1.013 hPa

Boiling point/boiling range: 1.695 °C at 1.013 hPa

Flash point: Not applicable

Evaporation rate: No information available.

Flammability (solid, gas): The product is not flammable.

Lower explosion limit: Not applicable

Upper explosion limit: Not applicable

Vapour pressure: 1 hPa at 1.077 °C

Relative vapour density: No information available.

Density: 2,8 g/cm³ at 20 °C

Relative density: No information available.

Water solubility: 42 g/l at 20 °C

Partition coefficient: n-octanol/water: Not applicable for inorganic substances

Auto-ignition temperature: No information available.

Decomposition temperature: No information available.

Viscosity, dynamic: No information available.

Explosive properties: Not classified as explosive.

Oxidizing properties: none

9.2. Other information

Ignition temperature: Not applicable

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10. Stability and reactivity

10.1. Reactivity

See section 10.3

10.2. Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3. Possibility of hazardous reactions

Generates dangerous gases or fumes in contact with:

acids

Possible formation of:

Hydrogen fluoride

10.4. Conditions to avoid

no information available

10.5. Incompatible materials

glass, various metals

10.6. Hazardous decomposition products

in the event of fire: See section 5.

11. Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

LD50 Rat: ca. 148,5 mg/kg

US-EPA

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Acute inhalation toxicity:

Symptoms: Possible damages: mucosal irritations, Cough, After a latency period: Lung oedema

Acute dermal toxicity:

LD50 Rat: > 2.000 mg/kg

US-EPA

Skin irritation:

Causes skin irritation.

Causes poorly healing wounds.

Eye irritation:

Causes serious eye irritation.

Risk of corneal clouding.

Sensitisation:

Buehler Test Guinea pig

Result: negative

Method: US-EPA

Germ cell mutagenicity:

Genotoxicity in vivo:

Chromosome aberration test

Mouse

male

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Oral

Bone marrow

Result: negative

Method: US-EPA

Genotoxicity in vitro:

In vitro mammalian cell gene mutation test

Chinese hamster lung cells

Result: negative

(ECHA)

Ames test

Salmonella typhimurium

Result: negative

(ECHA)

Carcinogenicity:

This information is not available.

Reproductive toxicity:

This information is not available.

Teratogenicity:

This information is not available.

Specific target organ toxicity - single exposure:

This information is not available.

Specific target organ toxicity - repeated exposure:

This information is not available.

Aspiration hazard:

This information is not available.

11.2. Further information

Decomposition of the substance with tissue moisture.

After absorption:

Systemic effects:

Cardiac irregularities, Nausea, respiratory arrest, Convulsions, Unconsciousness, death

The following applies to soluble inorganic fluorides in general: may cause irritations to burns in contact with eyes, skin, mucous membranes. Systemic effect: drop in blood calcium level, agitation, spasms, cardiovascular disorders, CNS disorders.

Other dangerous properties can not be excluded.

This substance should be handled with particular care.

12. Ecological information

12.1. Toxicity

Toxicity to fish:

LC50 *Oncorhynchus mykiss* (rainbow trout): 108 mg/l; 96 h

Analytical monitoring: yes

(ECHA)

Toxicity to daphnia and other aquatic invertebrates:

EC50 *Daphnia magna* (Water flea): 338 mg/l; 48 h

(IUCLID)

EC5 *E.sulcatum*: 101 mg/l

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(maximum permissible toxic concentration) (Hommel)

Toxicity to algae:

IC50 *Desmodesmus subspicatus* (green algae): 850 mg/l; 72 h
(IUCLID)

Toxicity to bacteria:

EC0 *Pseudomonas putida*: 231 mg/l; 16 h
(referred to the anion) (maximum permissible toxic concentration) (IUCLID)
EC50 activated sludge: 2.930 mg/l; 3 h
ISO 8192 (IUCLID)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

static test NOEC *Daphnia magna* (Water flea): 8,9 mg/l; 21 d (ECHA)

12.2. Persistence and degradability

Biodegradability:

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Partition coefficient: n-octanol/water:

Not applicable for inorganic substances

12.4. Mobility in soil

No further relevant information available.

12.5. Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6. Other adverse effects

Additional ecological information:

Hazard for drinking water supplies.
Discharge into the environment must be avoided.

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

14. Transport information

Land transport (ADR/RID):

14.1 UN number	UN 1690
14.2 Proper shipping name	SODIUM FLUORIDE, SOLID
14.3 Class	6.1
14.4 Packing group	III
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	E

Inland waterway transport (ADN):

Not relevant

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Air transport (IATA):

14.1 UN number	UN 1690
14.2 Proper shipping name	SODIUM FLUORIDE, SOLID
14.3 Class	6.1
14.4 Packing group	III
14.5 Environmentally hazardous	--
14.6 Special precautions for user	no

Sea transport (IMDG):

14.1 UN number	UN 1690
14.2 Proper shipping name	SODIUM FLUORIDE, SOLID
14.3 Class	6.1
14.4 Packing group	III
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
EmS	F-A S-A

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Not relevant

15. Regulatory information

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

EU regulations:

Major Accident Hazard Legislation:

SEVESO III

ACUTE TOXIC

H2

Quantity 1: 50 t

Quantity 2: 200 t

Occupational restrictions:

Take note of Dir 94/33/EC on the protection of young people at work. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:

not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC:

not regulated

Substances of very high concern (SVHC):

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).

National legislation:

Storage class: 6.1 D

15.2. Chemical safety assessment:

For this product a chemical safety assessment was not carried out.

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16. Other information

Full text of H-Statements referred to under sections 2 and 3.:

H301 Toxic if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Training advice:

Provide adequate information, instruction and training for operators.

Labelling:

Signal word: Danger

Hazard statements:

H301 Toxic if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

EUH032 Contact with acids liberates very toxic gas.

Precautionary statements:

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

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

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Met. Corr. 1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity – Category 4

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

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