

# Safety Data Sheet

According to EC-Regulation 2020/878; Internal KF 110

## Section 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Trade Name: Internal KF 110  
Product Number.: 08 3007  
Reach registration number: not applicable

### 1.2 Relevant identified uses of the substance or mixture and uses advised

Relevant identified uses of the substance or mixture  
Chemical for research and use in laboratories  
Uses advised against: -  
The full text of any mentioned and identified use categories are given in section 16.

### 1.3 Details of the supplier of the safety data sheet

Company and address: Nanion Technologies GmbH  
Ganghoferstrasse 70a  
D-80339 Munich  
Germany  
Contact person: Dr. Niels Fertig, CEO  
Email: info@nanion.de  
SDS date: 13.05.2025  
SDS Version: 3.0

### 1.4 Emergency telephone number

Contact the National Poison Information (dial 112, 24h service; Germany). See section 4 "First aid measures".

## Section 2: Hazards identification

### 2.1 Classification of the substance or mixture

Eye Irritation<sub>2</sub>, H319; see full test of H-phrases in section 2.2, as amended by Regulation (EU) 2024/2865.

### 2.2 Label Elements

Hazard pictogram(s):  
Signal word: -  
Hazard statement(s): -  
Safety statement(s):  
General –  
Prevention: -  
Response: -  
Storage: -  
Disposal: -  
Identity of the substances primarily responsible for the major health hazards

## Buffer solutions - Safety Data Sheet

### 2.3 Other hazards

This product does not contain substances identified as endocrine disruptors according Regulation (EU) 2018/605.

Additional labelling: Safety data sheet available on request (EUH210).

Tools: Automated patch clamp Safety Data Sheet according to Regulation (EU) 2020/878 amending Annex II of Reach (EC) No. 1907/2006 1/8 buffer solutions.

Additional warnings: -

VOC: -

## Section 3: Compositions/information on ingredients

### 3.1/3.2 Substances/Mixtures

Name: potassium fluoride

Identification Nos.: CAS-No.: 7789-23-3, EC-No.: 232-151-5, INDEX-No.: 009-005-00-2

Content: 0,25 - <1%

CLP classification: Acute Tox. 3; H301, H311, H331

Name: potassium hydroxide

Identification Nos.: CAS-No.: 1210-58-3

Content: 0,25 - <1%

CLP classification: Met. Corr. 1; Acute Tox. 4; Skin. Corr. 1A, Skin Corr. 1B, H290, H302, H314

(\*) See full text of H-phrases in chapter 16. Occupational exposure limits are listed in section 8, if these are available.

Other information:

ATEmix (inhale, vapour) > 20

ATEmix (inhale, dust/mist) > 20

ATEmix (dermal) > 2000

ATEmix (oral) > 2000

## Section 4: First aid measures

### 4.1 Description of first aid measures

General Information: -

In the case of accident:

Contact a doctor or casualty department – take the label or this safety data sheet. The doctor can contact THE National Poisons Information Service (dial 112, 24h service, Germany). Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation:

Bring the person into fresh air and stay with him/her.

Skin contact:

Immediately remove contaminated clothing and shoes. Ensure that skin, which has been exposed to the material, is washed thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

Eye contact:

Remove contact lenses. Flush Eyes immediately with plenty of water or isotonic water (20-30°C) for at least 15 minutes. Seek medical assistance and continue flushing during transport. Make sure to flush under the upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

Ingestion:

Provide plenty of water for the person to drink and stay with him/her. In Case of malaise, seek medical advice

## Buffer solutions - Safety Data Sheet

immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the victim lean forward with head down to avoid inhalation of/or choking on vomited material.

Burns:

not applicable

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

nothing special.

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

Nothing Special.

Information to medics: Bring this Safety Data Sheet.

## Section 5: Firefighting measures

### 5.1 Extinguishing media

Recommended: Alcohol-resistant foam, carbonic acid, powder, water mist. Waterjets should not be used, since they can spread the fire.

### 5.2 Special hazards arising from the substance or mixture

Nothing special.

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact.

Upon direct exposure contact The National Poison Service (dial 112, 24h service; Germany) in order to obtain further advice.

## Section 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedure

No specific requirements.

### 6.2 Environmental precautions

No specific requirements.

### 6.3 Methods and material for containment and cleaning up

Use sand, sawdust, earth, vermiculite, diatomaceous earth to contain and collect noncombustible absorbent materials and place in container for disposal, according to local regulations. To the extent possible cleaning is performed with normal cleaning agents. Avoid use of solvents.

### 6.4 Reference to other sections

See section on "Disposal Considerations" in regard of handling of waste. See section on "Exposure Controls/Personal Protection" for protective measures.

## Section 7: Handling and storage

### 7.1 Precautions for safe handling

Smoking, storage tobacco, consumption and storage of food or liquids are not allowed in the workrooms. See section on "Exposure Controls/Personal Protection" for information on personal protection.

## Buffer solutions - Safety Data Sheet

### 7.2 Conditions for safe storage, including any incompatibilities

Always store in containers of the same material as the original container. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Storage temperature: Refrigerator, 2 – 8°C

### 7.3 Specific end use(s)

This product should only be used for applications quoted in section 1.2.

## Section 8: Exposure controls/personal protection

### 8.1 Control parameters

OEL:

Potassium hydroxide

Long-term exposure limit (8-hour TWA reference period): - ppm | - mg/m<sup>3</sup>

Short-term exposure limit (15- minute reference period): - ppm | - 2mg/m<sup>3</sup>

DNEL/PNEC:

No data available.

### 8.2 Exposure controls

Compliance with the accepted occupational exposure limits values should be controlled on a regular basis.

General recommendations:

Observe general occupational hygiene standards. Smoking, eating and drinking are not allowed in the work premises.

Exposure scenarios:

In the event exposure scenarios are appended to the safety data sheet, the operational conditions and risk management measures in these shall be complied with.

Exposure limits:

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Exposure limits:

Occupational exposure limits have not been defined for the substances in this product.

Appropriate technical measures:

Airborne gas and dust concentrations must be kept at a minimum and below current limit values (see above).

Installation of an exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and – showers are clearly marked.

Hygiene measures:

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

Measures to avoid environment exposure:

No specific requirements.

Individual protection measures, such as personal protective equipment:

Generally:

Use only CE marked protective equipment.

## Buffer solutions - Safety Data Sheet

Respiratory equipment:  
No specific requirements.

Skin protection:  
Dedicated work clothing should be worn.

Hand protection:  
No specific requirements.

Eye protection:  
No specific requirements.

### Section 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Form: liquid  
Colour: No data available.

Odour: No data available.  
pH: 7,2  
Viscosity (40°C): No data available.  
Density (g/cm<sup>3</sup>): No data available.

Phase changes:  
Melting point (°C): No data available.  
Boiling point (°C): No data available.  
Vapour pressure: No data available.

Data on fire and explosion hazards:

Flashpoint (°C): No data available.  
Ignition (°C): No data available.  
Self-ignition (°C): No data available.  
Explosion Limits (Vol %): No data available.

Solubility:  
Solubility in water: Soluble.  
n-octanol/water coefficient: No data available.

#### 9.2 Other information

Solubility in fat (g/L): No data available.

### Section 10: Stability and reactivity

#### 10.1 Reactivity:

No data available.

#### 10.2 Chemical stability:

The product is stable under the conditions, noted in the section "Handling and Storage".

#### 10.3 Possibility of hazardous reactions:

Nothing special.

#### 10.4 Conditions to avoid:

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

#### 10.5 Incompatible materials:

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

## Buffer solutions - Safety Data Sheet

### 10.6 Hazardous decomposition products:

The product is not degraded when used as specified in "Section 1".

## Section 11: Toxicological information

### 11.1 Information on toxicological products

Acute toxicity - Substance: - Species - Test - Route - Result: -  
Potassium fluoride – rat – LD50 – oral – 245mg/kg  
Substance – Species – Test – Route of exposure – Result  
Potassium hydroxide – rat – LD50 – oral – 333mg/kg

Skin corrosion/irritation:  
Data on substance: potassium hydroxide  
Test: no guideline followed  
Organism: rabbit  
Result: corrosive

Serious eye damage/irritation:  
Data on substance: potassium fluoride.  
Test: No guideline followed.  
Result: Risk of turbid cornea.  
Data on substance: potassium hydroxide  
Test: no guideline followed  
Organism: rabbit  
Result: corrosive

Germ cell mutagenicity:  
No data available.

Carcinogenicity:  
No data available.

Reproductive toxicity:  
No data available.

STOT-single exposure:  
No data available.

STOT-repeated exposure:  
No data available.

Aspiration hazard:  
No data available.

Long term effects:  
No data available.

### 11.2 Information on toxicological products

Endocrine disruption: The product is free from known endocrine disruption substances. Due to the high purity required for electrophysiological application, no plasticizers, additives or potential hormone-active components are present.

## Section 12: Ecological information

### 12.1 Toxicity

Acute toxicity - Substance: - Species - Test - Route - Result: -  
Substance – Species – Test – Duration – Result  
Potassium fluoride – fish – LC50 – > 2,3mg/l

## Buffer solutions - Safety Data Sheet

Substance – Species – Test – Route of exposure – Result  
Potassium hydroxide – rat – LD50 – oral – 333mg/kg

### 12.2 Persistence and degradability

Substance – Biodegradability – Test – Result  
No data available.

### 12.3 Bioaccumulative potential

Substance – Potential Bioaccumulation – LogPow – BCF  
Potassium fluoride – No – -0,77 – no data available

### 12.4 Mobility in soil

Potassium fluoride: Log Koc= -0,531363, Calculated from LogPow ().

### 12.5 Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

### 12.6 Other adverse effects

Nothing special.

## Section 13: Disposal considerations

### 13.1 Waste treatment methods

Product is not covered by regulations on dangerous waste.

Waste:

EWC code: -

Specific labelling: -

Contaminated packing:

Contaminated packaging must be disposed of similarly to the product.

No specific requirements.

## Section 14: Transport information

### 14.1 – 14.4

Not dangerous goods according to ADR, IATA and IMG,

14.1 UN number: -

14.2 UN proper shipping name: -

14.3 Transport hazard class(es): -

14.4 packing group: -

Notes: -

Tunnel restriction code: -

IMDG:

UN number: -

Proper shipping name: -

Class: -

PG\*: -

EmS: -

MP\*\*: -

Hazardous constituent: -

IATA/ICAO:

UN number: -

Proper shipping name: -

Class: -

## Buffer solutions - Safety Data Sheet

PG\*: -

14.5 Environmental hazards -

14.6 Special precaution for user -

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

No data available.

(\*) Packing group (\*\*) Marine pollutant

### Section 15: Regulatory information

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

Restriction for applicant: -

Demands for the specific education: -

Additional information: -

Sources:

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/ECC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006 (CLP).

15.2 Chemical safety assessment: -

not applicable

### Section 16: Other information:

Full text of H-phrases as mentioned in "Section3":

H290 – May be corrosive to metals.

H301 – Toxic if swallowed.

H302 – Harmful if swallowed.

H311 – Toxic in contact with skin.

H314 – Causes severe skin burns and eye damage.

H331 – Toxic if inhaled.

The full text of identified uses as mentioned in "Section 1": -

Additional label elements: -

Other:

In accordance with Regulation (EC) No. 1272/2008 (CLP) the evaluation of the classification of the mixture is based on:

The classification of the mixture in regard of physical hazards has been based on experimental data. It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet is not a product

## Buffer solutions - Safety Data Sheet

specification (please have a look at our Certificate of Analysis).

The Information in this safety data sheet applies only to this specific product (mentioned in "Section1") and is not necessarily correct use with other chemicals/products.

A Change (in proportion to the last essential change (first cipher in safety data sheet version, see in "Section 1")) is found under 1.3 Details of the supplier of the safety data sheet; SDS Version.

The safety data sheet is validated by:

Axel Brüggemann (Product Manager Reagents)

Date of the last essential change: 02.07.2024

(Cipher in SDS version) 2.0

Date of last minor change: 25.06.2024

(Cipher in SDS version) 1.3