



WTW Safety Data Sheet
According to EC Directives 91/155/EEC

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

Product name:

Fluoride Standard Solution 10 g/l F⁻

Ord. No.: 120 160

Model: ES/F

Manufacturer:

WTW Wissenschaftlich-Technische Werkstätten GmbH, Dr.-Karl-Slevogt-Straße 1, D-82362 Weilheim, Germany, Tel.: (0881) 183-0, Fax.: (0881) 62539

Emergency telephone:
(001)-703-527-3887

2. Composition/information on ingredients

Chemical characterization: Aqueous saline solution

Hazardous ingredients: Sodium fluoride

Hazard symbols: Toxic (T)
R-phrases: 25-32-36/38
Content: 2,2 %
CAS-No.: 7681-49-4
EINECS-No.: 231-667-8
EG-No.: 231-667-8

3. Hazards identification

Toxic if swallowed. Acids generate very toxic gases.
Irritating to eyes and skin.

4. First aid measures

After inhalation: Fresh air

After skin contact: Wash off with plenty of water.
Immediately remove contaminated clothing.

After eye contact: Rinse out with plenty of water with the eyelid held wide open.
(for at least 10 minutes) Immediately summon eye specialist.

After ingestion: Make injured person drink plenty of water. Induce vomiting.
Clean skin of vomit. Immediately summon doctor.

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5. Fire-fighting measures

<i>Suitable extinguishing media:</i>	To suit environment.
<i>Unsuitable extinguishing media:</i>	No information available.
<i>Special risks:</i>	Development of hazardous vapours possible in the event of fire: Hydrogen fluoride. Do not stay in dangerous zone without suitable chemical protection clothing and selfcontained breathing apparatus.
<i>Other information:</i>	Non combustible.

6. Accidental release measures

<i>Personal-related precautionary measures:</i>	Avoid contact with eyes and skin.
<i>Environmental-protection measures:</i>	Do not allow to enter sewerage system.
<i>Procedures for cleaning/absorption:</i>	Take up with liquid-absorbent material. Forward for disposal. Clean up affected area with water.

7. Handling and storage

<i>Handling:</i>	No further requirements
<i>Storage:</i>	Tightly closed at room temperature. Accessible only for authorized persons.

8. Exposure control/personal protection

<i>Specific control parameters:</i>	MAK-value for sodium fluoride: 2,5 mg/m ³ total dust (Germany).
Personal protective equipment	
<i>Respiratory protection:</i>	Required when aerosols are generated
<i>Eye protection:</i>	Protective glasses
<i>Hand protection:</i>	Gloves
<i>Industrial hygiene:</i>	Wash hands and face after working with substance. Immediately change contaminated clothing. Do not eat or drink at workplace.

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9. Physical and chemical properties

<i>Form:</i> Liquid	<i>Colour:</i> Colourless	<i>Odour:</i> Odourless
<i>pH-value</i>	6,4 at 20°C	
<i>Melting temperature:</i>	°C	
<i>Boiling temperature:</i>	about 100°C	
<i>Ignition temperat:</i>	°C	
<i>Flash point:</i>	°C	
<i>Explosion limite lower:</i>	/	
<i> upper:</i>	/	
<i>Density:</i>	/	
<i>Solubility in water:</i>	miscible	
<i>Thermal decomposition:</i>	/	

10. Stability and reactivity

Conditions to be avoided: No information available

Substances to be avoided: Acids (They generate hydrogen fluoride)

Hazardous decomposition products: Hydrogen fluoride

Further information: None

11. Toxicological information

Acute toxicity: LD 50 (oral, rat): 52 mg/kg for sodium fluoride

Further toxicological information: After ingestion: burns of: mouth, oesophagus, gastrointestinal tract, pain, vomiting, spasms, shock, cardiac dysrhythmia, respiratory arrest, death.
After eye and skin contact: severe irritations.
Causes poorly healing wounds.

12. Ecological information

Ecotoxic effects: Toxic for fishes (925 mg/l Sodium fluoride).
Do not allow to enter drinking water supplies, waste water or soil.

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13. Disposal considerations

- Products:* There are no uniform regulations for the disposal of chemicals or residues. The disposal is regulated through corresponding regional laws and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose the special waste.
- Packaging:* Handle contaminated packaging in the same way as the substance itself. If not officially specified differently, noncontaminated packaging may be treated like household waste or recycled.

14. Transport information

- ADR/GGVSE:* UN 3287 Giftiger anorganischer, flüssiger Stoff, N.A.G., 6.1 II (Natriumfluoridlösung)
- IMDG/GGVSee:* UN 3287 Toxic liquid inorganic, n.o.s., 6.1 II (Solution of sodium fluoride)
- ICAO/IATA:* UN 3287 Toxic liquid inorganic, n.o.s., 6.1 II

Further information None

15. Regulatory information

Labelling according to EC directives

- Symbol:* Harmful (Xn)
- R-phrases:* 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
- S-phrases:* 26-45 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

German regulations

Water pollution class; nonpolluting solution

Regulation on combustible liquids; VbF: Non combustible

Other regulations: None

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16. Other information

Chemistry information sheet: Merkblatt BG-Chemie M 005:
Fluorwasserstoff, Flußsäure und anorganische Fluoride

Date of issue: 12.2.2004
Supersedes edition of 4.12.2002
Reason for alteration: Change in transport classification

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.