

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

Trade name	Sodium fluoride
Stock number:	A13019, LT3290
CAS Number:	7681-49-4
EC number:	231-667-8
Index number:	009-004-00-7


1.2 Relevant identified uses of the substance

or mixture and uses advised against.	No further relevant information available.
Identified use:	SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:	Alfa Aesar GmbH & Co.KG A Johnson Matthey Company Zeppelinstr. 7b 76185 Karlsruhe / Germany Tel: +49 (0) 721 84007 280 Fax: +49 (0) 721 84007 300 Email: tech@alfa.com www.alfa.com
Informing department:	Product safety Tel + +049 (0) 7275 988687-0
1.4 Emergency telephone number:	Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number) Poison Information Center Mainz www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

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

	GHS06 skull and crossbones
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Acute Tox. 3 H301 Toxic if swallowed.

	GHS07
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
Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

	T; Toxic
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R25: Toxic if swallowed.

	Xi; Irritant
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R36/38: Irritating to eyes and skin.

R32: Contact with acids liberates very toxic gas.

Information concerning particular hazards**for human and environment:****Other hazards that do not result in classification**

Not applicable

No information known.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008****Hazard pictograms****Signal word****Hazard statements**

The substance is classified and labelled according to the CLP regulation.

GHS06

Danger

H301 Toxic if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

P280

P301+P310

P305+P351+P338

P302+P352

P405

P501

Precautionary statements

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

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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

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

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

EUH032 Contact with acids liberates very toxic gas.

Additional information:**2.3 Other hazards****Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients**3.1 Substances**

CAS# Designation: 7681-49-4 Sodium fluoride

Identification number(s):

EC number: 231-667-8

Index number: 009-004-00-7

SECTION 4: First aid measures**4.1 Description of first aid measures****General information**

Instantly remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest provide artificial respiration.

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After inhalation

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

After skin contact

Rinse opened eye for several minutes under running water. Then consult doctor.

Do not induce vomiting; instantly call for medical help.

After eye contact**After swallowing****4.2 Most important symptoms and effects,****both acute and delayed**

No further relevant information available.

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

No further relevant information available.

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SECTION 5: Firefighting measures

5.1 Extinguishing media Suitable extinguishing agents	Use fire fighting measures that suit the environment.
5.2 Special hazards arising from the substance or mixture	If this product is involved in a fire, the following can be released: Hydrogen fluoride (HF) Sodium oxide
5.3 Advice for firefighters Protective equipment:	Wear self-contained breathing apparatus. Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures	Put on breathing apparatus. Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation
6.2 Environmental precautions:	Do not allow material to be released to the environment without proper governmental permits. Do not allow product to reach sewage system or water bodies. Do not allow to enter the ground/soil.
6.3 Methods and material for containment and cleaning up:	Dispose of contaminated material as waste according to item 13. No special measures required.
6.4 Reference to other sections	See Section 7 for information on safe handling See section 8 for information on personal protection equipment. See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling	Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation/exhaustion at the workplace. Prevent formation of dust.
Information about protection against explosions and fires:	The product is not flammable
7.2 Conditions for safe storage, including any incompatibilities Storage Requirements to be met by storerooms and containers: Information about storage in one common storage facility:	No special requirements. Do not store together with acids. Store away from water. Store away from oxidizing agents.
Further information about storage conditions:	This product is hygroscopic. Store under dry inert gas. Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Protect from humidity and keep away from water. Store in a locked cabinet or with access restricted to technical experts or their assistants.
7.3 Specific end use(s)	No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
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8.1 Control parameters**Components with critical values that require monitoring at the workplace:****7681-49-4 Sodium fluoride (100,0%)**

AGW (Germany)	1 E mg/m ³ 4(II);als Fluor berechnet; DFG, Y, H
PEL (USA)	2,5 mg/m ³ as F
REL (USA)	2,5 mg/m ³ as F
TLV (USA)	2,5 mg/m ³ as F, BEI

Ingredients with biological limit values:**7681-49-4 Sodium fluoride (100,0%)**

BGW (Germany)	7,0 mg/g Kreatinin U b Fluorid
	4,0 mg/g Kreatinin U d Fluorid
BEI (USA)	2 mg/L urine prior to shift Fluoride (background, nonspecific)
	3 mg/L urine end of shift Fluoride (background, nonspecific)

Additional information: No data**8.2 Exposure controls****Personal protective equipment**

General protective and hygienic measures	The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work.
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Breathing equipment:
Protection of hands:

Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.
Use breathing protection with high concentrations.
Check protective gloves prior to each use for their proper condition.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Material of gloves
Penetration time of glove material
Eye protection:

Impervious gloves
Not determined
Safety glasses
Face protection
Protective work clothing.

Body protection:**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Form: Powder
Colour: White
Smell: Odourless
Odour threshold: Not determined.

pH-value: Not applicable.**Change in condition**

Melting point/Melting range: 993 °C
Boiling point/Boiling range: 1704 °C
Sublimation temperature / start: Not determined
Inflammability (solid, gaseous) Not determined
Ignition temperature: Not determined
Decomposition temperature: Not determined
Self-inflammability: Not determined

Critical values for explosion:

Lower: Not determined
Upper: Not determined

Steam pressure at 1077 °C: 1,3 hPa**Density at 20 °C** 2,78 g/cm³**Relative density** Not determined.**Vapour density** Not applicable.**Evaporation rate** Not applicable.**Solubility in / Miscibility with****Water:** Not determined**Partition coefficient (n-octanol/water):** Not determined.**Viscosity:****dynamic:** Not applicable.**kinematic:** Not applicable.**9.2 Other information** No further relevant information available.**SECTION 10: Stability and reactivity****10.1 Reactivity**

Contact with acids liberates very toxic gas.

10.2 Chemical stability

Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Reacts with strong oxidizing agents
Contact with acids liberates very toxic gas.

10.5 Incompatible materials:

Water/moisture
Oxidizing agents

10.6 Hazardous decomposition products:

Acids
Hydrogen fluoride
Sodium oxide

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity:** The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.**LD/LC50 values that are relevant for classification:**

Oral LD50 31 mg/kg (rat)

Skin irritation or corrosion:

Causes skin irritation.

Eye irritation or corrosion:

Causes serious eye irritation.

Sensitization:

No sensitizing effect known.

Germ cell mutagenicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.

Carcinogenicity:

IARC-3: Not classifiable as to carcinogenicity to humans.
ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this product.

Reproductive toxicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.

Specific target organ system toxicity - repeated exposure:

No effects known.

Specific target organ system toxicity - single exposure:

No effects known.

Aspiration hazard:

No effects known.

Experience with humans:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for components in this product.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information**12.1 Toxicity**

No further relevant information available.

Aquatic toxicity:

No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Additional ecological information:

Do not allow material to be released to the environment without proper governmental permits.

General notes:(Contd. on page 4)
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Water hazard class 1 (Assessment by list): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
Avoid transfer into the environment.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods Recommendation**

Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.

Uncleaned packagings: Recommendation:

Disposal must be made according to official regulations.

SECTION 14: Transport information**UN-Number ADR, IMDG, IATA**

UN1690

14.2 UN proper shipping name ADR IMDG IATA

1690 SODIUM FLUORIDE, SOLID
SODIUM FLUORIDE, SOLID, MARINE POLLUTANT
SODIUM FLUORIDE, SOLID

14.3 Transport hazard class(es) ADR

ADR



Class Label IMDG

6.1 (T5) Toxic substances.
6.1



Class Label IATA

6.1 Toxic substances.
6.1



Class Label

6.1 Toxic substances.
6.1

Packing group ADR, IMDG, IATA

III

14.5 Environmental hazards: Marine pollutant:

Yes (P)
Symbol (fish and tree)

14.6 Special precautions for user

Kemler Number:

Warning: Toxic substances.

EMS Number:

60

F-A,S-A

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Transport/Additional information:

ADR

Excepted quantities (EQ):

E1

Limited quantities (LQ)

5 kg

Transport category

2

Tunnel restriction code

E

UN "Model Regulation":

UN1690, SODIUM FLUORIDE, SOLID, 6.1, III

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

Australian Inventory of Chemical

Substances
Substance is listed.

Standard for the Uniform Scheduling of

Drugs and Poisons
Substance is not listed.

National regulations

Information about limitation of use:

Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.

Technical instructions (air):

Class	Share in %
III	100.0

Water hazard class:

Water hazard class 1 (Assessment by list): slightly hazardous for water.

Other regulations, limitations and prohibitive regulations

ELINCS (European List of Notified Chemical

Substances)
Substance is not listed.

Substances of very high concern (SVHC)

according to REACH, Article 57
Substance is not listed.

REACH - Pre-registered substances

Substance is listed.

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet: Health, Safety and Environmental Department.

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Trade name **Sodium fluoride****Abbreviations and acronyms:**

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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
P: Marine Pollutant
GHS: Globally Harmonized 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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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