Date of issue: 26/07/2018
Date of revision: 01/07/2020

Safety Data Sheet

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

Product identifier:
- Product name: Sodium fluoride
- SDS No. : 7153E-3

Details of the supplier of the safety data sheet
- Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.
- Address: 3-1, Honmachibashi, Chuo-ku,Osaka ,JAPAN
- Division: Safety Management Dept. of Chemicals
- Telephone number: +81-6-6946-8061
- FAX: +81-6-6946-1607
- e-mail address: kagakuhinanzenkanri@kishida.co.jp

2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS
- Acute toxicity (Oral): Category 3
- Skin corrosion/irritation: Category 2
- Serious eye damage/eye irritation: Category 1
- Specific target organ toxicity - single exposure: Category 1(nerve/nervous system; heart; kidney)
- Specific target organ toxicity - repeated exposure: Category 1(teeth; bone)
- Specific target organ toxicity - repeated exposure: Category 2(heart; liver; kidney; genital(male))

ENVIRONMENT HAZARDS
- Hazardous to the aquatic environment (Acute): Category 3

(Note) GHS classification without description: Not classified/Classification not possible

Label elements

Signal word: Danger

HAZARD STATEMENT
- Toxic if swallowed
- Causes skin irritation
- Causes serious eye damage
- Causes damage to organs after single exposure(nerve/nervous system; heart; kidney)
- Causes damage to organs through prolonged or repeated exposure(teeth; bone)
- May cause damage to organs through prolonged or repeated exposure(heart; liver; kidney; genital(male))
- Harmful to aquatic life

PRECAUTIONARY STATEMENT

Prevention
- Avoid release to the environment.
- Do not breathe dust/fume/gas/mist/vapors/spray.
- Wash contaminated parts thoroughly after handling.
- Wear protective gloves.

Wear eye protection/face protection.
Do not eat, drink or smoke when using this product.

Response

Get medical advice/attention if you feel unwell.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: Rinse mouth.

Disposal

Dispose of contents/container in accordance with local/national regulation.

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Sodium fluoride
Content (%):98(min)
Chemical formula:FNa
Chemicals No, Japan:1-332
CAS No.:7681-49-4
MW:41.99
ECNO:231-667-8

Note : The figures shown above are not the specifications of the product.

4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical attention/advice if you feel unwell.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.

IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

IF SWALLOWED

Rinse mouth.
Immediately call a POISON CENTER or doctor/physician.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.
Unsuitable extinguishing media data is not available.

Specific hazards arising from the substance or mixture

Containers may explode when heated.
Fire may produce irritating, corrosive and/or toxic gases.

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.
Wear protective gloves/protective clothing/eye protection/face protection.
Firefighters should wear self-contained breathing apparatus with full face peace operated positive pressure mode.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.
Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.
Avoid raising dust.

Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

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

(Protective measures against fire and explosion)

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.
Avoid contact with eyes.

Safety Measures

Wear protective gloves, protective clothing or face protection.
Wear eye protection/face protection.
When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.
Do not eat, drink or smoke when using this product.
Take off contaminated clothing and wash it before reuse.

Storage

Conditions for safe storage

Keep container tightly closed.
Store in a cool, dry place. Do not store in direct sunlight.
Keep under lock and key.

Container and packaging materials for safe handling

Polyethylene

8. Exposure controls/personal protection
Control parameters
Adopted value
(Sodium fluoride)
ACGIH(1979) TWA: 2.5mg-F/m3 (Bone dam; fluorosis)
OSHA-PEL
Sodium fluorideTWA: 2.5mg-F/m3
Exposure controls
Appropriate engineering controls
Do not use in areas without adequate ventilation.
Eye wash station should be available.
Washing facilities should be available.
Individual protection measures
Respiratory protection
Wear respiratory protection.
Hand protection
Wear protective gloves.
Eye protection
Wear eye/face protection.

9. Physical and Chemical Properties
Information on basic physical and chemical properties
Physical state: Crystalline powder or powder, Granular
Color: White
Odor: Odourless
pH data is not available.
Boiling point or initial boiling point: 1700℃
Boiling range data is not available.
Melting point/Freezing point: 993℃
Decomposition temperature data is not available.
Flammability (gases, liquids and solids) data is not available.
Flash point data is not available.
Auto-ignition temperature data is not available.
Lower and upper explosion limit/flammability limit data is not available.
Vapor pressure data is not available.
Relative vapor density (Air=1) data is not available.
Density and/or relative density: 2.8g/cm3
Kinematic viscosity data is not available.
Solubility:
Solubility in water: 4.0 g/100 ml (20℃)
n-Octanol/water partition coefficient data is not available.
No Particle characteristics data is not available.

10. Stability and Reactivity
Reactivity
Not available.
Chemical stability
Stable under normal storage/handling conditions.
Possibility of hazardous reactions
Decomposes on contact with hot surfaces or flames. This produces toxic and corrosive fumes.
Reacts with acids. This produces toxic and corrosive fumes. (ICSC 0951)

Conditions to avoid
Contact with incompatible materials.
Contact with fire source.
Incompatible materials
Acids
Hazardous decomposition products
Fluorine compounds, Sodium compounds

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11. Toxicological Information
Information on toxicological effects
Acute toxicity
Acute toxicity (Oral)
[GHS Cat. Japan, base data]
(Sodium fluoride)
rat LD50=69mg-NaF/kg, 71mg-NaF/kg (cal.) (ATSDR, 2003; IARC 27, 1982) et al.
Irritant properties
Skin corrosion/irritation
[GHS Cat. Japan, base data]
(Sodium fluoride)
rabbit mild irritation (EPA Pesticide, 2007); EU Skin Ittit. 2 (ECHA CL Invt., Access on May 2017)
Serious eye damage/irritation
[GHS Cat. Japan, base data]
(Sodium fluoride)
rabbit severe irritation (EPA Pesticide, 2007)
Allergenic and sensitizing effects data is not available.
Mutagenic effects data is not available.
Carcinogenicity
(Sodium fluoride)
ACGIH-A4(1979) : Not Classifiable as a Human Carcinogen
Reproductive toxicity data is not available.
STOT
STOT-single exposure
[cat.1]
[GHS Cat. Japan, base data]
(Sodium fluoride)
nerve/nervous system; heart; kidney (ATSDR, 2003; EHC 36, 1984)
STOT-repeated exposure
[cat.1]
[GHS Cat. Japan, base data]
(Sodium fluoride)
teeth; bone (ACGIH 7th, 2001; NTP TR393, 1990)
[cat.2]
[GHS Cat. Japan, base data]
(Sodium fluoride)
heart; liver; kidney; male genitalia (ACGIH 7th, 2001; NTP TR393, 1990)
Aspiration hazard data is not available.
Additional data
May cause lung disorders by massive inhalation of powdered substance.
-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Harmful to aquatic life

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(Sodium fluoride)

Crustacea (Gammaridea) EC50=84.6mg/L/96hr (38.28mg-F/L, calc.) (ECETOC TR91, 2003)

Hazardous to the aquatic environment (Long-term)

[GHS Cat. Japan, base data]

(Sodium fluoride)

Fish (Atheriniformes) NOEC =>9.9mg/L/28days (MOE Japan, 2017) et al.

Water solubility

(Sodium fluoride)

4.0 g/100 ml (20℃) (ICSC, 2003)

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

(Sodium fluoride)

BCF < 6.4 (Check & Review, Japan)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

Waste treatment methods

Avoid release to the environment (- if this is not the intended use).

Dispose of contents/container in accordance with local/national regulation.

14. Transport Information

UN No.: 1690

Proper Shipping Name :

SODIUM FLUORIDE, SOLID

Class or division : 6.1

Packing group : III

ERG GUIDE No.: 154

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 1690

Proper Shipping Name :

SODIUM FLUORIDE, SOLID

Class or division : 6.1

Packing group : III

IATA Dangerous Goods Regulations

UN No.: 1690

Proper Shipping Name :

SODIUM FLUORIDE, SOLID

Class or division : 6.1

Hazard labels : Toxic

Packing group : III
Environmental hazards
MARPOL Annex III - Prevention of pollution by harmful substances
Marine pollutants (yes/no) : no
MARPOL Annex V - Prevention of pollution by garbage discharge
Specific target organ toxicity - repeated exposure: cat.1
Sodium fluoride

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture
US Federal Regulations
Chemicals listed in TSCA Inventory
Sodium fluoride
Other regulatory information
Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

GHS classification and labelling
Acute Tox. 3: H301 Toxic if swallowed
Skin Irrit. 2: H315 Causes skin irritation
Eye Dam. 1: H318 Causes serious eye damage
STOT SE 1: H370 Causes damage to organs after single exposure
STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure
Aquatic Acute 3: H402 Harmful to aquatic life
Reference Book
Globally Harmonized System of classification and labelling of chemicals, (6th ed., 2015), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN
IMDG Code, 2018 Edition (Incorporating Amendment 39-18)
IATA Dangerous Goods Regulations (61th Edition) 2020
Classification, labelling and packaging of substances and mixtures (Table 3 ECNO6182012)
2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2019 TLVs and BEIs. (ACGIH)
http://monographs.iarc.fr/ENG/Classification/index.php
Supplier's data/information
General Disclaimer
This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.
The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.
The GHS classification data given here is based on current Japan official data (NITE published in 2018).