Safety Data Sheet
According to 29 CFR 1910.1200 (OSHA HCS)

SDS No. 2090
Review date: February 10, 2016

1 Identification of substance and company

Product details

Product name: Sodium fluoride
Product code: 12722, 14011, C2455

Relevant identified uses of the substance:
Research and product development

Manufacturer/Supplier:
Noah Technologies Corporation
1 Noah Park
San Antonio, Texas 78249-3419
Phone: (210) 691-2000
Web site: www.noahtech.com

Emergency information:
CHEMTREC
800-424-9300

2 Hazards identification

Signal Word: Danger
Pictogram: Skull and crossbones, Exclamation mark

GHS Classification according to 29CFR1910:
Acute toxicity, oral - 3
Skin irritation - 2
Eye irritation - 2A
Acute aquatic toxicity - 3

Hazard statements:
H301 Toxic if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H402 - Harmful to aquatic life

Precautionary statements:
P264 - Wash thoroughly after handling
P260 - Do not breathe dust / fume / gas / mist / vapors / spray
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment
P280 - Wear protective gloves / protective clothing / eye protection / face protection
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.
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P337 + P313 - If eye irritation persists: Get medical advice/attention
P352 + 364 - Take off contaminated clothing and wash before reuse
P405 - Store locked up
P501 - Dispose of contents / container in accordance with local / regional / national / international regulations

HMIS ratings (scale 0-4):
Health hazard 2
Flammability 0
Physical hazard 0

3 Composition/Information on ingredients

Chemical name: Sodium fluoride
Designation: (CAS#):
7681-49-4
EC Number:
231-667-8
Formula: NaF
Synonyms: Floridine, sodium monofluoride, roach salt

4 First aid measures

After inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek immediate medical advice
After skin contact: Instantly wash with water and soap and rinse thoroughly
Seek immediate medical advice
After eye contact: Rinse opened eye for at least 15 minutes under running water. Assure adequate flushing by separating the eyelids with fingers.
Seek immediate medical advice
After swallowing: Seek immediate medical treatment

Information for doctor:

The following symptoms may occur: Human systemic effects by ingestion and intradermal routes: paresthesia, ptosis, tremors, fluid intake, muscle weakness, headache, EKG changes, respiratory depression, hypermotility, diarrhea, nausea or vomiting, salivary gland changes, changes in teeth and supporting structures and other musculoskeletal changes and increased immune response.

5 Fire-fighting measures

Suitable extinguishing agents: Use extinguishing media most suitable to surrounding fire conditions

Special hazards caused by the material, its products of combustion or resulting gases: In case of fire, the following can be released: Oxides of sodium and hydrogen fluoride

Protective equipment: Wear self-contained breathing apparatus

Wear fully protective fire fighting equipment/clothing in fire situations

6 Accidental release measures

Person-related safety precautions: Wear personal protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Measures for environmental protection: Do not allow material to be released to the environment without proper governmental permits

Measures for cleaning/collecting: Dispose of contaminated material as waste according to item 13

Ventilate and wash spill site after material removal is complete

Additional information: See Section 7 for information on safe handling

See Section 8 for information on personal protective equipment

See Section 13 for information on disposal

7 Handling and storage

Information for safe handling: Protect from moisture, hygroscopic

Keep containers tightly sealed

Store in cool, dry place in tightly closed containers

Ensure good ventilation/exhaust at the workplace

Information about protection against explosions and fires: This material is not flammable

Cannot be stored in glass or porcelain. Corrosive to both.

Storage requirements to be met by storerooms and containers: Store away from air / water / moisture

Do not store together with acids or bases

Information about storage in one common storage facility: Keep container tightly sealed

Store in cool, dry conditions in well sealed containers

Further information about storage conditions:

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

Components with critical values that require monitoring at the workplace: OSHA PEL: TWA 2.5 mg(F)/m³

NIOSH REL: TWA 2.5 mg(F)/m³

ACGIH TLV: TWA 2.5 mg(F)/m³

Additional information: Bone damage, fluorosis

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

Avoid contact with the eyes and skin

Respiratory protection: Use suitable respirator when high concentrations are present

Use only NIOSH/MESA or CEN approved dust mask type N95 or TYPE P1 (EN 143)

Hand protection: Impervious gloves

Eye protection: Safety glasses

Chemical safety goggles

Skin protection: Protective work clothing

Additional protective equipment: Sufficient to prevent contact

Emergency eyewash and safety shower

9 Physical and chemical properties

General Information:

Physical state: Powder or crystals

Color: White

Smell: Odorless

Molecular Weight (Calculated): 41.99

pH (5% solution): Not determined

Melting point/range: 993 °C

Boiling point/range: 1787 °C

Sublimation temperature/start: Not determined
Flash point: Non-flammable
Autoignition temperature: Not determined
Decomposition temperature: Not determined
Danger of explosion: Product does not present an explosion hazard
Flammable limits: Non-flammable
Lower: Not determined
Upper: Not determined
Vapor pressure (mm Hg): 1 mm Hg @ 1077 °C
Density at 20 °C 2.78 g/cm³
Solubility in/Miscibility with water 42.2 g/L @ 18 °C

10 Stability and reactivity
Conditions to be avoided: No decomposition if used and stored according to specifications
See section 7 for information on proper handling and storage
Materials to be avoided: Water/moisture
Acids
Bases
Dangerous reactions: Will form hydrofluoric acid on contact with acids
Hazardous decomposition products: Oxides of sodium and hydrogen fluoride

11 Toxicological information
Acute toxicity:
LD/LC50 values that are relevant for classification:
Oral-rat LD₅₀: 52 mg/kg
Intravenous-rat LD₅₀: 26 mg/kg
Nutritional and gross metabolic effects: Weight loss or decreased weight gain
Experimental teratogenic effects
Primary irritant effect:
on the skin: Causes skin irritation/corrosion
on the eye: Causes moderate eye irritation/corrosion
Sensitization: No sensitizing effects known
Additional toxicological information: Symptoms of fluoride overexposure may include salivation, nausea, vomiting, abdominal pain, fever, labored breathing. Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcaemia. Prolonged exposure to fluoride dusts, vapors or mists results in perforation of the nasal septum. Chronic effects include excessive calcification of the bones, ligaments and tendons.
Carcinogenicity: No classification data on carcinogenic properties of this material is available from the IARC, ACGIH, NTP or OSHA

12 Ecological information
Aquatic toxicity:
Toxicity to fish: Rainbow trout LC₅₀: 200 mg/L.96H
Toxicity to daphnia and other aquatic invertebrates: Daphnia magna EC₅₀: 98 mg/L.48H
Persistence and degradability: No further relevant information available
Behavior in environmental systems:
Bioaccumulative potential:
Bioaccumulation:
Salmo trutta: 5 mg/L.10D
Bioconcentration factor (BCF): 2.3
Mobility in soil:
No further relevant information available
Additional ecological information:
General notes: Do not allow product or large quantities of it to reach ground water, water course or sewage system
Do not allow material to be released to the environment without proper governmental permits

13 Disposal considerations
Recommendation:
Consult state, local or national regulation for proper disposal
Allow professional disposal company to handle waste
Must be specially treated under adherence to official regulations
Unclean packaging
Recommendation:
Disposal must be made according to official regulations

14 Transport information
Land transport DOT
Proper shipping name: Sodium fluoride
DOT Hazard Class: 6.1
UN Identification number: UN1690
Label(s): PGIII
Packing group: III
North American Emergency Response
Guidebook No.: 154
Air transport ICAO-TI and IATA-DGR:

Proper shipping name: Sodium fluoride
DOT Hazard Class: 6.1
UN Identification number: UN1690
Label(s): PGIII
Packing group: III
North American Emergency Response Guidebook No.: 154

UPS Ground / FedEx Ground

Proper shipping name: Sodium fluoride
DOT Hazard Class: 6.1
UN Identification number: UN1690
Label(s): PGIII
Packing group: III
North American Emergency Response Guidebook No.: 154

UPS Air

Proper shipping name: Sodium fluoride
DOT Hazard Class: 6.1
UN Identification number: UN1690
Label(s): DOT-SP-8249
Packing group: III
North American Emergency Response Guidebook No.: 154

15 Regulatory information

SARA Section 302 Extremely Hazardous components and corresponding TPOs: Not applicable
SARA Section 311/312 Hazards: Acute Health Hazard, Chronic Health Hazard
SARA Section 313 components: Not applicable
California Proposition 65 components: Not applicable
TSCA: All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory

16 Other information

The above information is accurate to the best of our knowledge. However, since data, safety standards and government regulation are subject to change and the conditions of handling and use, or misuse are beyond our control. NOAH MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. User should satisfy himself that he has all current data relevant to his particular use.