

Safety Data SheetAccording to Regulation (EC) No. 1907/2006
OSHA Regulation 29 CFR 1910.1200
Canadian Regulation SOR/88-66

Revision Date: 2012-06-01
Reason for Revision: Reviewed Only

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: HI 4010-01 0.10 mol/L Fluoride Standard

Application: For Calibrating Electrodes

Company Information (USA):

Hanna Instruments, Inc.
584 Park East Dr, Woonsocket, Rhode Island, USA 02895

Technical Service Contact Information:

1-800-426-6287 (8:30AM - 5:00PM ET)
+1-401-766-4260 (8:30AM - 5:00PM ET)

USA Emergency Contact Information:

1-800-424-9300 (Chemtrec 24Hr. Emergency)

International Emergency Contact Information:

+1-703-527-3887 (Chemtrec 24Hr. Emergency)

E-mail Address:

tech@hannainst.com

SECTION 2: HAZARD IDENTIFICATION

Non-hazardous product as specified in Directives 67/548/EEC and 1999/45/EC.
Non-hazardous product as specified in OSHA Regulation 29 CFR 1910.1200.
Non-hazardous product as specified in Canadian Regulation SOR/88-66.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component: Sodium Fluoride

EC-No.: 231-667-8

CAS-No.: 7681-49-4

Hazard: T

Phrases: R: 25-32-36/38

Content: > 0.1% - < 1%

SECTION 4: FIRST AID MEASURES

After Inhalation: Remove to fresh air. Call a physician if breathing becomes difficult.

After Skin Contact: Wash affected area with water and soap.

After Eye Contact: Rinse out with plenty of water for at least 15 minutes. If pain persists, summon medical advice.

After Swallowing: Wash out mouth with plenty of water, provided person is conscious. Obtain medical attention if feeling unwell.

General Information: Not available

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Foam, Powder, Dry Sand

Special Risks:

Development of hazardous combustion gases or vapors possible in the event of fire. The following may develop in event of fire: Hydrogen Fluoride

Special Protective Equipment:

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

Additional Information:

Contain escaping vapors with water. Prevent fire-fighting water from entering surface water or groundwater.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Avoid generation of vapors/aerosols. Do not inhale vapors/aerosols.

Environmental Precautions:

Do not discharge into the drains/surface waters/groundwater.

Additional Notes:

Take up with liquid-absorbent material. Clean up affected area and dispose according to local regulation.

SECTION 7: HANDLING AND STORAGE

Handling:

No restrictions

Storage:

Store at room temperature (+15 to +25 °C). Tightly closed in a dry and well-ventilated place.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Type	Value	Source	Type	Value	Source
Sodium Fluoride					
TWA (8hr)	2.5 mg (F)/m ³	Belgium	TWA (8hr)	2.5 mg (F)/m ³	Canada (Ontario)
TWA (8hr)	2.5 mg (F)/m ³	Canada (Quebec)	TWA (8hr)	2.5 mg (F)/m ³	France
TWA (8hr)	1 mg (F)/m ³	Germany	TWA (8hr)	2.5 mg (F)/m ³	Greece
TWA (8hr)	2.5 mg (F)/m ³	Hungary	TWA (8hr)	2.5 mg (F)/m ³	Italy
TWA (15min)	2 mg (F)/m ³	Netherlands	TWA (8hr)	1 mg (HF)/m ³	Poland
TWA (8hr)	2.5 mg (F)/m ³	Portugal	TWA (8hr)	2.5 mg (F)/m ³	Romania
TWA (8hr)	2.5 mg (F)/m ³	Spain	TWA (8hr)	2.5 mg (F)/m ³	UK
TWA (8hr)	2.5 mg (F)/m ³	USA (ACGIH)	TWA (8hr)	2.5 mg (F)/m ³	USA (OSHA)

Engineering:

Maintain general industrial hygiene practice.

Personal Protective Equipment:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

Respiratory Protection:

Required when vapors/aerosols are generated. Work under hood.

Protective Gloves:

Rubber or plastic

Eye Protection:

Goggles or face mask

Industrial Hygiene:

Change contaminated clothing. Wash hands after working with substance.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Appearance:	Colorless liquid	Odor:	Odorless	Density at 20°C:	0.99 g/cm ³
Melting Point:	NA	Boiling Point:	ND	Solubility:	Soluble
pH at 20°C:	~ 8	Explosion Limit:	NA	Flash Point:	NA
Thermal Decomp.:	NA				

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SECTION 10: STABILITY AND REACTIVITY

Conditions to be Avoided:

Heating

Hazardous Polymerization:

Will not occur.

Further Information:

Not available

Hazardous Decomposition Products:

In the event of fire: See section 5.

Substances to be Avoided:

Acids

SECTION 11: TOXICOLOGICAL INFORMATION

Product Toxicity

Quantitative data on the toxicity of this product is not available.

Potential Health Effects:

Inhalation: Irritations. Other possible symptoms are: coughing, dyspnoea.

Skin Contact: Slight irritations.

Eye Contact: Slight irritations.

Ingestion: Burns of: mouth, oesophagus, gastrointestinal tract, pain, vomiting, spasms, shock.

Further Data: The following applies to soluble inorganic fluorides in general: may cause irritations to burns in contact with eyes, skin, mucous membranes. Systemic effect: drop in blood calcium level, agitation, spasms, cardiovascular disorders, CNS disorders. Further hazardous properties cannot be excluded. The product should be handled with the usual care when dealing with chemicals

Component Toxicity

Acute Toxicity:

Sodium Fluoride

LD50: Oral - Rat - 52 mg/kg

Chronic Toxicity:

Not Available

Additional Data:

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Sodium Fluoride – as the pure substance

Acute toxicity

LDLo (oral, human): 75 mg/kg.

Specific symptoms in animal studies:

Eye irritation test (rabbit): Irritations.

Subacute to chronic toxicity

Noncarcinogenic in animal experiments.

Mutagenicity (mammal cell test): micronucleus negative.

Bacterial mutagenicity: Bacillus subtilis: positive.

Bacterial mutagenicity: Salmonella typhimurium: negative.

Bacterial mutagenicity: Escherichia coli: negative.

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SECTION 12: ECOLOGICAL INFORMATION

Quantitative data on the toxicity of this product is not available.
APPLICABLE TO PARTIAL COMPONENT:
 The following applies to Sodium Fluoride – as the pure substance
Biologic degradation:
 Methods for the determination of biodegradability are not applicable to inorganic substances.
Ecotoxic effects:
Biological effects:
 Forms toxic and corrosive mixtures with water even if diluted. Hazard for drinking water supplies.
 Fish toxicity: *Gambusia affinis* LC50: 925 mg/L /96 h. *L.macrochirus* LC50: >530 mg/L /96 h.
 Daphnia toxicity: *Daphnia magna* EC50: 338 mg/L /48 h.
 Algal toxicity: *Desmodesmus subspicatus* IC50: 850 mg/L /72 h.
 Bacterial toxicity: activated sludge EC50: 2930 mg/L /3 h.
Maximum permissible toxic concentration:
 Algal toxicity: *Sc.quadricauda* IC5: 249 mg/L /8 d (referred to the anion).
 Bacterial toxicity: *Ps.putida* EC0: 231 mg/L /16 h (referred to the anion).
 Protozoa: *E.sulcatum* EC5: 101 mg/L.
Further ecologic data:
 The following applies to inorganic fluorides in general: biological effects:
 fish: *L. idus* LC50 660 mg/L; bacteria: *Ps. putida* toxic as from 231 mg/L ; algae: *Sc. quadricauda* toxic as from 249 mg/L ; protozoa: *E. sulcatum* toxic as from 101 mg/L ; *U. parduczi* toxic as from 71 mg/L (all values as NaF). Hazard for drinking water.
Further Data: Do not allow to enter waters, waste water, or soil!

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: Chemical residues are generally classified as special waste and thus covered by local regulations. Contact local authorities or disposal companies for advice. Handle contaminated packaging in the same way as the substance itself.

SECTION 14: TRANSPORTATION INFORMATION

Land: Not subject to transport regulations	Sea: Not subject to transport regulations	Air: Not subject to transport regulations
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SECTION 15: REGULATORY INFORMATION

Labeling according to EC Directives:
 Non-hazardous according to Directives 67/548/EEC and 1999/45/EC.

SECTION 16: OTHER INFORMATION

Text of R-phrases under Section 3	Revision Information	Legend
25: Toxic if swallowed.	Revision Date: 2012-06-01	NA: Not Applicable
32: Contact with acids liberates very toxic gas.	Supersedes edition of: 2009-06-10	ND: Not Determined
36/38: Irritating to eyes and skin.	Reason for revision: Reviewed Only	

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.