

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

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: HI 4016-46 Sodium Conditioning Solution

Application: Sodium Conditioning Solution

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

Irritating to eyes and skin.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component: Ammonium bifluoride

EC-No.: 215-676-4

CAS-No.: 1341-49-7

Hazard: T, C

Phrases: R: 25-34

Content: 0.1% - < 1%

SECTION 4: FIRST AID MEASURES

After Inhalation: Remove to fresh air. Call in physician.

After Skin Contact: Wash off with plenty of water. Dab with polyethylene glycol 400. Immediately remove contaminated clothing.

After Eye Contact: Rinse out with plenty of water for at least 10 minutes with the eyelid held wide open. Immediately call in ophthalmologist.

After Swallowing: Make victim drink plenty of water (if necessary several litres), avoid vomiting (risk of perforation!). Immediately call in physician. Do not attempt to neutralize.

General Information: Not available

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Water spray, Carbon Dioxide, Dry Chemical Powder, Appropriate Foam.

Special Risks:

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Do not inhale vapors/aerosols. Avoid substance contact. Ensure supply of fresh air in enclosed rooms. Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

Environmental Precautions:

Do not allow to enter sewerage system.

Additional Notes:

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

SECTION 7: HANDLING AND STORAGE

Handling:

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

Storage:

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

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering:

Safety shower and eye bath.

Personal Protective Equipment:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Respiratory Protection:

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

Protective Gloves:

Rubber or plastic

Eye Protection:

Goggles or face mask

Industrial Hygiene:

Immediately change contaminated clothing. Apply skin-protective barrier cream. Wash hands and face after working with substance.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Appearance: Colorless liquid

Odor: Odorless

Density at 20°C: 1 g/cm³

Melting Point: ND

Boiling Point: ND

Solubility: Soluble

pH at 20°C: ~ 4.0

Explosion Limit: NA

Flash Point: NA

Thermal Decomp.: NA

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:

alkalis, acids

SECTION 11: TOXICOLOGICAL INFORMATION

Product Toxicity

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

Potential Health Effects:

- Inhalation:** Irritations of the mucous membranes, coughing.
- Skin Contact:** Irritant effects
- Eye Contact:** Irritant effects
- Ingestion:** local irritation symptoms, nausea, vomiting, diarrhea
- Further Data:** The following applies to ammonium salts in general: after swallowing: local irritation symptoms, nausea, vomiting, diarrhoea. Systemic effect: after the uptake of very large quantities: drop in blood pressure, collapse, CNS disorders, spasms, narcotic conditions, respiratory paralysis, haemolysis. Further hazardous properties cannot be excluded. The product should be handled with the care usual when dealing with chemicals.

Component Toxicity

Acute Toxicity:

Not Available

Chronic Toxicity:

Not Available

Additional Data:

APPLICABLE TO PARTIAL COMPONENT:

The following applies to Ammonium bifluoride – as the pure substance

Acute toxicity

LD50 (oral, rat): 130 mg/kg.

Further toxicological information

After inhalation: Irritations of the mucous membranes, coughing, and dyspnoea. Cannot be excluded: respiratory arrest.

After skin contact: burns. tissue damage. Causes poorly healing wounds.

After eye contact: burns. Risk of blindness!

After swallowing: burns in mouth, throat, oesophagus and gastrointestinal tract. Risk of perforation in the oesophagus and stomach.

After absorption: spasms, unconsciousness, cardiac dysrhythmia, respiratory arrest, shock, disturbed electrolyte balance.

Chronic uptake results in damage of: bone marrow, liver, kidneys.

Other notes:

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.

SECTION 12: ECOLOGICAL INFORMATION

Quantitative data on the ecotoxicity of this product are not available.

APPLICABLE TO PARTIAL COMPONENT(S):

The following applies to Ammonium bifluoride – as the pure substance

Biologic degradation:

Methods for the determination of biodegradability are not applicable to inorganic substances.

Behavior in environmental compartments:

Distribution: log p(o/w): -4.37 (calculated).

No bioaccumulation is to be expected (log P(o/w) <1).

Ecotoxic effects:

Biological effects:

Fish toxicity: Danio rerio LC0: 237 mg/L /96 h, Danio rerio LC100: 562 mg/L /96 h.

Bacterial toxicity: activated sludge EC50: 2394 mg/L.

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.

Safety Data SheetAccording to Regulation (EC) No. 1907/2006
OSHA Regulation 29 CFR 1910.1200
Canadian Regulation SOR/88-66**SECTION 15: REGULATORY INFORMATION****Labeling according to EC Directives:****Symbol:** Xi: Irritant**R-phrases:** 36/38: Irritating to eyes and skin.**S-phrases:** 24/25: Avoid contact with skin and eyes**SECTION 16: OTHER INFORMATION****Text of R-phrases under Section 3**

25: Toxic if swallowed.

34: Causes burns.

Revision Information**Revision Date:** 2012-06-01**Supersedes edition of:** 2009-06-10**Reason for revision:** Reviewed Only**Legend**

NA: Not Applicable

ND: Not Determined

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.