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HI 70701
1 g/L Fluoride Calibration Solution

Safety Data Sheet

According to Regulation (EC) No. 1907/2006

Revision Date: 2008-12-01
Reason for Revision: REACH Compliance and General Update

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: HI 70701 1 g/L Fluoride Calibration Solution

Application: For Calibrating Electrodes

Additional Product Codes: HI 70701/1L
HI 70701L
HI 70701M

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

Contact with acids liberates very toxic gas.

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 effected 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:

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.

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 dry. 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

Ingredients:

EC
Name: Fluorides, Inorganic
Value: 2.5 mg/m³

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/cm³
Melting Point:	NA	***Boiling Point:***	ND	***Solubility:***	Soluble
pH at 20° C:	~ 7	***Explosion Limit:***	NA	***Flash Point:***	NA
Thermal Decomp.:	NA				

SECTION 10: STABILITY AND REACTIVITY

Conditions to be Avoided:

Heating

Hazardous Decomposition Products:

In the event of fire: See section 5.

Hazardous Polymerization:

Will not occur.

Substances to be Avoided:

Acids

Further Information:

Not available

SECTION 11: TOXICOLOGICAL 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
Acute toxicity
LD50 (oral, rat): 52 mg/kg.
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 nagative.
Bacterial mutagenicity: Bacillus subtilis: positive.
Bacterial mutagenicity: Salmonella typhimurium: negative.
Bacterial mutagenicity: Escherichia coli: negative.

In Case of Inhalation: Irritations. Other possible symptoms are: coughing, dyspnoea.

In Case of Skin Contact: Slight irritations.

In Case of Eye Contact: Slight irritations.

In Case of 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. Property of this product must be anticipated on the basis from the components of the preparation:

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.
Algeal toxicity: Desmodesmus subspicatus IC50: 850 mg/L /72 h.
Bacterial toxicity: activated sludge EC50: 2930 mg/L /3 h.
Maximum permissible toxic concentration:
Algeal 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:	***Sea:***	***Air:***
Not subject to transport regulations.	Not subject to transport regulations.	Not subject to transport regulations.

SECTION 15: REGULATORY INFORMATION

Labeling according to EC Directives:

Symbol: None

R-phrases: 32: Contact with acids liberates very toxic gas.

S-phrases:

Contains:

SECTION 16: OTHER INFORMATION

Text of R-phrases under Section 3

25: Toxic if swallowed.
32: Contact with acids liberates very toxic gas.
36/38: Irritating to eyes and skin.

Revision Information

Revision Date:	2008-12-01
Supersedes edition of:	2008-01-18
Reason for revision:	REACH Compliance and General Update

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.