HI 70427
1.5M Nitric Acid Solution

Safety Data Sheet

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

Revision Date: 2012-05-25
Reason for Revision: Section 14 Updated

SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY

Product Name: HI 70427 1.5M Nitric Acid Solution

Application: For Chemical Analysis

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 combustible material may cause fire. Causes burns.

SECTION 3: COMPOSITION AND COMPONENT INFORMATION

Component: Nitric Acid

EC-No.: 231-714-2

CAS-No.: 7697-37-2

Hazard: C, O

Phrases: R: 8-35

Content: > 5% - < 20%

SECTION 4: FIRST AID MEASURES

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

After Skin Contact: Wash affected area 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 liters), 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:

Non-combustible. Contact with metals may lead to the formation of Nitrous Gases and hydrogen. Ambient fire may liberate hazardous vapors. The following may develop in event of fire: Nitrogen Oxides

Special Protective Equipment:

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

Additional Information:

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Avoid substance contact. Do not inhale vapors/aerosols. Ensure supply of fresh air in nclosed rooms.

Environmental Precautions:

Take up with liquid-absorbent material. Forward for disposal. Clean up affected area.

Additional Notes:

None

SECTION 7: HANDLING AND STORAGE

Handling:

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

Storage:

Tightly closed. Store at room temperature (+15 to +25 °C recommended). Protect from light.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Type	*Value*	*Source*	*Type*	*Value*	*Source*
Nitric Acid					
TWA (15min)	2.6 mg/m³	Belgium	TWA (8hr)	5 mg/m³	Canada (Ontario)
TWA (8hr)	2 ppm	Canada (Quebec)	TWA (15min)	2.6 mg/m³	France
TWA (8hr)	2.6 mg/m³	Germany	TWA (8hr)	5 mg/m³	Greece
TWA (8hr)	5 mg/m³	Hungary	TWA (15min)	2.6 mg/m³	Italy
TWA (8hr)	1.3 mg/m³	Netherlands	TWA (8hr)	5 mg/m³	Poland
TWA (8hr)	2 ppm	Portugal	TWA (15min)	2.6 mg/m³	Romania
Ceiling	2.6 mg/m³	Spain	TWA (8hr)	5.2 mg/m³	UK
TWA (8hr)	2 ppm	USA (ACGIH)	TWA (8hr)	2 ppm	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. The resistance of the protective clothing to chemicals should be established 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-protectve barrier cream. Wash hands and face after working with substance.

SECTION 9: PHYSICAL/CHEMICAL PROPERTIES

Appearance:	Colorless liquid	***Odor:***	Almost Odorless	***Density at 20°C:***	~ 1.07 g/cm³
Melting Point:	~ -10 °C	***Boiling Point:***	~ 101 °C	***Solubility:***	Soluble
pH at 20°C:	< 1	***Explosion Limit:***	NA	***Flash Point:***	ND
Thermal Decomp.:	NA				

SECTION 10: STABILITY AND REACTIVITY

Conditions to be Avoided:

Heating

Hazardous Polymerization:

Will not occur.

Further Information:

Strong oxidizing agent, unsuitable working materials: metals (formation of gas: nitrous gases, hydrogen).

Hazardous Decomposition Products:

In the event of fire: See section 5.

Substances to be Avoided:

Oxidizable substances, organic solvents, metals, metal alloys, alkali metals, alkaline earth metals, ammonia, alkalis, acids

SECTION 11: TOXICOLOGICAL INFORMATION

Product Toxicity

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

Potential Health Effects:

Inhalation:	Burns of mucous membranes, coughing, dyspnoea. Inhalation may lead to the formation of oedemas in the respiratory tract.
Skin Contact:	Burns.
Eye Contact:	Burns.
Ingestion:	Tissue damage (mouth, oesophagus, gastrointestinal tract), strong pain (risk of perforation!), bloody vomiting, death.
Further Data:	The following applies to nitrites/nitrates in general: methaemoglobinaemia after the uptake of large quantities. Further hazardous properties cannot be excluded. The product should be handled with the usual care when dealing with chemicals.

Component Toxicity

Acute Toxicity:

Nitric Acid

LC50: Inhalation - Rat - 334 ppm

Chronic Toxicity:

Not Available

Additional Data:

Not Available

SECTION 12: ECOLOGICAL INFORMATION

Behavior in environmental compartments:
Distribution: log p(o/w): -2.3 (anhydrous substance).
No bioaccumulation is to be expected (log P(o/w <1).
Ecotoxic effects:
Biological effects:
Toxic effect on fish and plankton. Harmful effect due to pH shift. Forms corrosive mixtures with water even if diluted. Does not cause biological oxygen deficit. Hazard for drinking water supplies.
Further ecologic data:
The following applies to nitrates in general: may contribute to the eutrophication of water supplies.
Hazard for drinking water. Fish: LC50 > 500 mg/L.

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 (ADR/RID):	*Sea (IMDG):*	*Air (ICAO/IATA):*
UN No.:	2031	2031	2031
Proper Shipping Name:	Nitric acid	Nitric acid	Nitric acid
Class (Sub Risk):	8	8	8
Packing Group:	II	II	II

SECTION 15: REGULATORY INFORMATION

Labeling according to EC Directives:

Symbol: C: Corrosive
O: Oxidizer

R-phrases: 8-34: Contact with combustible material may cause fire. Causes burns.

S-phrases: 26-45: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Contains: Nitric acid

SECTION 16: OTHER INFORMATION

Text of R-phrases under Section 3

8:Contact with combustible material may cause fire.
35:Causes severe burns.

Revision Information

Revision Date: 2012-05-25

Supersedes edition of: 2009-06-10

Reason for revision: Section 14 Updated

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.