

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

### **SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY**

**Product Name:** HI 70427 1.5M Nitric Acid Solution

**Additional Product Codes:**

**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 effected 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 enclosed 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**

**Ingredients:**

**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-protective 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/cm<sup>3</sup>

**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**

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

- In Case of Inhalation:** Burns of mucous membranes, coughing, dyspnoea. Inhalation may lead to the formation of oedemas in the respiratory tract.
- In Case of Skin Contact:** Burns.
- In Case of Eye Contact:** Burns.
- In Case of 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. Property that must be anticipated on the basis from the components of the preparation:

**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**

- | <b>Land:</b>   | <b>Sea:</b>  | <b>Air:</b>  |
|--|--|--|
| ADR/RID: 8 PGII<br>UN-N: 2031<br>Name: NITRIC ACID, less than 20%. | IMDG: 8/UN 2031/PGII<br>Name: NITRIC ACID, less than 20%.<br>Ems:F-A S-B | ICAO/IATA: 8/UN 2031/PGII<br>Name: NITRIC ACID, less than 20%. |

Transport data applies to the COMPLETE KIT!

**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:** 2008-12-01  
**Supersedes edition of:** 2006-06-14  
**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.**