



# SAFETY DATA SHEET

Issuing Date 13-Aug-2015

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Revision Number 1

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product Identifier**

Product Name/Catalog ID AAHG1

**Other means of identification**

Product Description 1000 µg/mL Mercury

**Recommended use of the chemical and restrictions on use**

Recommended Use Laboratory chemicals.

Uses advised against No information available

**Details of the supplier of the safety data sheet**

**Company**

Inorganic Ventures  
300 Technology Drive  
Christiansburg, VA 24073  
web: www.inorganicventures.com

E-mail Address info@inorganicventures.com

**Emergency Telephone Number**

Chemtrec 1-800-424-9300 (US)  
Canutec - 1-613-996-6666 (Canada)

## 2. HAZARDS IDENTIFICATION

### GHS

**Classification**

|                                   |                           |
|-----------------------------------|---------------------------|
| Skin corrosion/irritation         | Category 1 Sub-category A |
| Serious Eye Damage/Eye Irritation | Category 1                |
| Reproductive Toxicity             | Category 1B               |

**Label Elements**

**Danger**

**Hazard Statements**

Causes severe skin burns and eye damage  
May damage fertility or the unborn child

**Appearance** Clear / Colorless**Physical State** Liquid**Odor** Odorless**Precautionary Statements - Prevention**

Do not handle until all safety precautions have been read and understood  
 Do not breathe dust/fume/gas/mist/vapors/spray  
 Wash face, hands and any exposed skin thoroughly after handling  
 Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response****Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 Immediately call a POISON CENTER or doctor/physician

**Skin**

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Immediately call a POISON CENTER or doctor/physician

**Ingestion**

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

- May be harmful in contact with skin

**Other Information****3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical Name | CAS-No    | Weight % |
|---------------|-----------|----------|
| Nitric acid   | 7697-37-2 | 5        |
| Mercury       | 7439-97-6 | 0.1      |

**4. FIRST AID MEASURES****First Aid Measures**

|                       |   |
|-----------------------|---|
| <b>General Advice</b> | Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.   |
| <b>Eye Contact</b>    | Immediate medical attention is required. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.   |
| <b>Skin Contact</b>   | Immediate medical attention is required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.  |
| <b>Inhalation</b>     | Call a physician or Poison Control Center immediately. Move to fresh air. If breathing is difficult, give oxygen. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Immediate medical attention is required. |
| <b>Ingestion</b>      | Immediate medical attention is required. Do NOT induce vomiting. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person.  |

**Protection of First-aiders** Use personal protective equipment. Avoid contact with skin, eyes and clothing.

**Most important symptoms and effects, both acute and delayed**

**Most Important Symptoms/Effects** Burn. Difficulty breathing.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Decomposition by contact with water may generate vapors which can be ignited by heat or open flame.

**Special Exposure Hazards Arising from the Substance/Mixture**

The product causes burns of eyes, skin and mucous membranes Thermal decomposition can lead to release of irritating and toxic gases and vapors

**Explosion Data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment. Do not get in eyes, on skin, or on clothing.

**Environmental Precautions**

**Environmental Precautions** Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Prevent product from entering drains. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

#### Methods and material for containment and cleaning up

**Methods for Cleaning up** Dam up. Neutralise with lime milk; soda. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water.

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling

**Handling** Wear personal protective equipment. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist.

### Conditions for safe storage, including any incompatibilities

**Technical measures/Precautions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible Products** None known based on information supplied.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

| Chemical Name            | ACGIH TLV                            | OSHA PEL  | NIOSH IDLH  |
|--------------------------|--------------------------------------|---|---|
| Nitric acid<br>7697-37-2 | 4 ppm STEL<br>TWA: 2 ppm             | TWA: 2 ppm<br>TWA: 5 mg/m <sup>3</sup><br>(vacated) TWA: 2 ppm<br>(vacated) TWA: 5 mg/m <sup>3</sup><br>(vacated) STEL: 4 ppm<br>(vacated) STEL: 10 mg/m <sup>3</sup> | IDLH: 25 ppm<br>TWA: 2 ppm<br>TWA: 5 mg/m <sup>3</sup><br>STEL: 4 ppm<br>STEL: 10 mg/m <sup>3</sup> |
| Mercury<br>7439-97-6     | TWA: 0.025 mg/m <sup>3</sup><br>Skin | (vacated) TWA: 0.05 mg/m <sup>3</sup><br>(vacated) STEL: 0.03 mg/m <sup>3</sup><br>Skin<br>(vacated) Ceiling: 0.1 mg/m <sup>3</sup><br>Ceiling: 0.1 mg/m <sup>3</sup> | IDLH: 10 mg/m <sup>3</sup><br>Ceiling: 0.1 mg/m <sup>3</sup><br>TWA: 0.05 mg/m <sup>3</sup>         |

### Appropriate engineering controls

**Engineering Measures** Ensure adequate ventilation, especially in confined areas.

### Individual protection measures, such as personal protective equipment

**Eye Protection** Tightly fitting safety goggles Face-shield  
**Skin and Body Protection** Impervious clothing Boots Chemical resistant apron  
**Hand Protection** Impervious gloves  
**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn  
**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

|   |                           |
|---|---------------------------|
| <b>Physical State</b>                         | Liquid                    |
| <b>Appearance</b>                             | Clear / Colorless         |
| <b>Odor</b>                                   | Odorless                  |
| <b><u>Property</u></b>                        | <b><u>Values</u></b>      |
| <b>pH VALUE</b>                               | No data available         |
| <b>Melting Point/Range</b>                    | No data available         |
| <b>Boiling Point/Range</b>                    | 100 °C                    |
| <b>Evaporation rate</b>                       | No data available         |
| <b>Flammability (solid, gas)</b>              | No data available         |
| <b>Vapor Pressure</b>                         | No data available         |
| <b>Vapor Density</b>                          | No data available         |
| <b>Relative Density</b>                       | No data available         |
| <b>Specific Gravity</b>                       | No data available         |
| <b>Water Solubility</b>                       | Miscible                  |
| <b>Partition coefficient: n-octanol/water</b> | No data available         |
| <b>Autoignition Temperature</b>               | No data available         |
| <b>Decomposition Temperature</b>              | No data available         |
| <b>Viscosity</b>                              | No data available         |
| <b>Explosive Properties</b>                   | No information available  |
| <b>Oxidizing Properties</b>                   | No information available  |
| <b><u>Other information</u></b>               |                           |
| <b>VOC Content</b>                            | No information available. |

## 10. STABILITY AND REACTIVITY

### Reactivity

No data available.

### Chemical Stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

#### **Hazardous Polymerization**

Hazardous polymerization does not occur.

### Conditions to Avoid

None known.

### Incompatible Materials

Reducing agents

### Hazardous Decomposition Products

Nitrogen oxides (NOx).

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### **Product Information**

The product causes burns of eyes, skin and mucous membranes. Harmful if swallowed  
Harmful by inhalation Harmful in contact with skin

#### **Inhalation**

Contact with moist mucous membranes of the respiratory system can cause caustic condition resulting in burns. Aspiration may cause pulmonary edema and pneumonitis. Harmful by inhalation. Causes burns. Corrosive to respiratory system. Inhaled corrosive substances can lead to a toxic edema of the lungs.

#### **Eye Contact**

Causes burns.

|                     |  |
|---------------------|--|
| <b>Skin Contact</b> | Causes burns. Harmful in contact with skin. May be absorbed through the skin in harmful amounts. |
| <b>Ingestion</b>    | Can burn mouth, throat, and stomach. Harmful if swallowed.                                       |

| Component                      | LD50 Oral | LD50 Dermal | LC50 Inhalation  |
|--------------------------------|-----------|-------------|--|
| Nitric acid<br>7697-37-2 ( 5 ) | -         | -           | = 130 mg/m <sup>3</sup> ( Rat ) 4 h = 67 ppm ( Rat ) 4 h |
| Mercury<br>7439-97-6 ( 0.1 )   | -         | -           | -  |

#### Information on toxicological effects

**Symptoms** No information available.

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Sensitization** No information available.

**Mutagenic Effects** No information available.

**Carcinogenic effects**

| Chemical Name            | ACGIH | IARC     | NTP | OSHA |
|--------------------------|-------|----------|-----|------|
| Nitric acid<br>7697-37-2 |       | Group 2A |     | X    |

**Reproductive Toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Target Organ Effects** Respiratory system, Skin, Eyes.

**Aspiration Hazard** No information available.

#### Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

**ATEmix (oral)** 5010 mg/kg

**ATEmix (dermal)** 5000 mg/kg

**ATEmix (inhalation-dust/mist)** 44.9 mg/L

**ATEmix (inhalation-vapor)** 1340 mg/L

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### **Ecotoxicity effects**

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

| Chemical Name            | Toxicity to Algae | Toxicity to Fish  | Microtox | Daphnia Magna (Water Flea)        |
|--------------------------|-------------------|---|----------|-----------------------------------|
| Nitric acid<br>7697-37-2 |                   | 72: 96 h Gambusia affinis mg/L LC50   |          |                                   |
| Mercury<br>7439-97-6     |                   | 0.5: 96 h Cyprinus carpio mg/L LC50<br>0.16: 96 h Cyprinus carpio mg/L LC50<br>semi-static 0.18: 96 h Cyprinus carpio mg/L LC50<br>static 0.9: 96 h Oryzias latipes mg/L LC50<br>flow-through |          | EC50 96 h = 5.0 µg/L (water flea) |

#### **Persistence and Degradability**

No information available.

#### **Bioaccumulation/Accumulation**

No information available.

| Chemical Name            | Log Pow |
|--------------------------|---------|
| Nitric acid<br>7697-37-2 | -2.3    |

**Other Adverse Effects****13. DISPOSAL CONSIDERATIONS****Waste treatment methods**

**Waste from Residues/Unused Products** Dispose of in accordance with federal, state and local regulations

**Contaminated Packaging** Do not re-use empty containers.

| Chemical Name        | RCRA | RCRA - Basis for Listing                             | RCRA - D Series Wastes    | RCRA - U Series Wastes |
|----------------------|------|--|---------------------------|------------------------|
| Mercury<br>7439-97-6 | U151 | Included in waste streams:<br>F039, K071, K106, K175 | 0.2 mg/L regulatory level |                        |

| Chemical Name            | California Hazardous Waste Status |
|--------------------------|-----------------------------------|
| Nitric acid<br>7697-37-2 | Toxic<br>Corrosive<br>Ignitable   |
| Mercury<br>7439-97-6     | Toxic                             |

**14. TRANSPORT INFORMATION****IMDG/IMO**

**14.1. UN-No** UN3264

**14.2. Proper Shipping Name** Corrosive liquid, acidic, inorganic, n.o.s

**14.3. Hazard Class** 8

**14.4. Packing Group** III

**Description** Not applicable.

**14.5. Marine Pollutant** None.

**14.6. Special Provisions** None

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** No information available.

**RID**

**14.1. UN-No** UN3264

**14.2. Proper Shipping Name** Corrosive liquid, acidic, inorganic, n.o.s

**14.3. Hazard Class** 8

**14.4. Packing Group** III

**Description** Not applicable.

**14.5. Environmental hazard** None

**14.6. Special Provisions** None

**ADR**

**14.1. UN-No** UN3264

**14.2. Proper Shipping Name** Corrosive liquid, acidic, inorganic, n.o.s

**14.3. Hazard Class** 8

**14.4. Packing Group** III

**Description** Not applicable.

**14.5. Environmental hazard** None

**14.6. Special Provisions** None

**ICAO**

**14.1. UN-No** UN3264

**14.2. Proper Shipping Name** Corrosive liquid, acidic, inorganic, n.o.s

**14.3. Hazard Class** 8

|                                   |  |
|-----------------------------------|--|
| <b>14.4. Packing Group</b>        | III  |
| <b>Description</b>                | Not applicable.                            |
| <b>14.5. Environmental hazard</b> | None                                       |
| <b>14.6. Special Provisions</b>   | None                                       |
| <b><u>IATA-DGR</u></b>            |  |
| <b>14.1. UN-No</b>                | UN3264                                     |
| <b>14.2. Proper Shipping Name</b> | Corrosive liquid, acidic, inorganic, n.o.s |
| <b>14.3. Hazard Class</b>         | 8  |
| <b>14.4. Packing Group</b>        | III  |
| <b>Description</b>                | Not applicable                             |
| <b>14.5. Environmental hazard</b> | None                                       |
| <b>14.6. Special Provisions</b>   | None                                       |

## 15. REGULATORY INFORMATION

### International Inventories

|                      |          |
|----------------------|----------|
| <b>TSCA</b>          | Complies |
| <b>DSL/NDSL</b>      | Complies |
| <b>EINECS/ELINCS</b> | Complies |
| <b>ENCS</b>          | Complies |
| <b>IECSC</b>         | Complies |
| <b>KECL</b>          | Complies |
| <b>PICCS</b>         | Complies |
| <b>AICS</b>          | Complies |

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*

*DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*

*EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances*

*ENCS - Japan Existing and New Chemical Substances*

*IECSC - China Inventory of Existing Chemical Substances*

*KECL - Korean Existing and Evaluated Chemical Substances*

*PICCS - Philippines Inventory of Chemicals and Chemical Substances*

*AICS - Australian Inventory of Chemical Substances*

### U.S. Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

#### **SARA 311/312 Hazard Categories**

|  |    |
|--|----|
| <b>Acute Health Hazard</b>               | No |
| <b>Chronic Health Hazard</b>             | No |
| <b>Fire Hazard</b>                       | No |
| <b>Sudden Release of Pressure Hazard</b> | No |
| <b>Reactive Hazard</b>                   | No |

#### **Clean Water Act**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name            | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|--------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Nitric acid<br>7697-37-2 | 1000 lb                     |                        |                           | X                          |
| Mercury<br>7439-97-6     |                             | X                      | X                         |                            |

#### **CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)



| Chemical Name            | Hazardous Substances RQs | Extremely Hazardous Substances RQs | RQ  |
|--------------------------|--------------------------|------------------------------------|---|
| Nitric acid<br>7697-37-2 | 1000 lb                  | 1000 lb                            | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |
| Mercury<br>7439-97-6     | 1 lb                     |                                    | RQ 1 lb final RQ<br>RQ 0.454 kg final RQ  |

**U.S. State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals:

| Chemical Name       | California Prop. 65 |
|---------------------|---------------------|
| Mercury - 7439-97-6 | Developmental       |

**U.S. State Right-to-Know Regulations**

| Chemical Name            | New Jersey | Massachusetts | Pennsylvania |
|--------------------------|------------|---------------|--------------|
| Nitric acid<br>7697-37-2 | X          | X             | X            |
| Mercury<br>7439-97-6     | X          | X             | X            |

**U.S. EPA Label Information**

|                              |
|------------------------------|
| <b>16. OTHER INFORMATION</b> |
|------------------------------|

Revision Date 13-Aug-2015

**Revision Note**

No information available

**Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of MSDS**