SAFETY DATA SHEET

Issuing Date 14-Aug-2015 **Revision Date** 14-Aug-2015 **Revision Number** 1

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

Product Identifier
Product Name/Catalog ID AABE1

Other means of identification
Product Description 1000 µg/mL Beryllium

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

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1
Skin Sensitization	Category 1
Specific target organ toxicity (repeated exposure)	Category 1

Label Elements

Danger

Hazard Statements
Harmful if inhaled
Causes skin irritation
Causes serious eye damage
May cause an allergic skin reaction
Causes damage to organs through prolonged or repeated exposure

Appearance Clear / Colorless **Physical State** Liquid **Odor** Vinegar-like

Precautionary Statements - Prevention
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Contaminated work clothing should not be allowed out of the workplace
Do not breathe dust/fume/gas/mist/vapors/spray
Do not eat, drink or smoke when using this product

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: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention
Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Other Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Nitric acid	7697-37-2	3
Beryllium di(acetate)	543-81-7	1.1

4. FIRST AID MEASURES

First Aid Measures

General Advice Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. May cause allergic skin reaction.

Eye Contact 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. If symptoms persist, call a physician.

Skin Contact May cause an allergic skin reaction. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. In the case of skin irritation or allergic reactions see a physician. If skin irritation persists, call a physician.

Inhalation Immediate medical attention is required. Move to fresh air. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Call a physician or Poison Control Center immediately. If breathing is difficult, give oxygen.

Ingestion 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 Difficulty breathing. May cause allergic skin reaction.

Indication of any immediate medical attention and special treatment needed

Notes to Physician May cause sensitization by skin contact

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
Thermal decomposition can lead to release of irritating and toxic gases and vapors May cause sensitization by skin contact

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. 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; 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. 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. Handle product only in closed system or provide appropriate exhaust ventilation at machinery.

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 7697-37-2	4 ppm STEL TWA: 2 ppm	TWA: 2 ppm TWA: 5 mg/m³ (vacated) TWA: 2 ppm (vacated) TWA: 5 mg/m³ (vacated) STEL: 4 ppm (vacated) STEL: 10 mg/m³	IDLH: 25 ppm TWA: 2 ppm TWA: 5 mg/m³ STEL: 4 ppm STEL: 10 mg/m³
Beryllium di(acetate) 543-81-7	TWA: 0.00005 mg/m³ Skin	TWA: 2 µg/m³ (vacated) TWA: 2 µg/m³ (vacated) STEL: 25 µg/m³ (vacated) Ceiling: 5 µg/m³ Ceiling: 5 µg/m³	IDLH: 4 mg/m³ Ceiling: 0.0005 mg/m³

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
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.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Clear / Colorless
Odor	Vinegar-like

Property	Values
pH VALUE	No data available
Melting Point/Range	No data available

Boiling Point/Range	100 °C
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Relative Density	No data available
Specific Gravity	No data available
Water Solubility	Miscible
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

Other information
VOC Content 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 Toxic by inhalation May cause sensitization by skin contact Contains a known or suspected carcinogen. May cause cancer by inhalation

Inhalation Toxic by inhalation.

Eye Contact There is no data available for this product.

Skin Contact May cause sensitization by skin contact.

Ingestion There is no data available for this product.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Nitric acid 7697-37-2 (3)	-	-	= 130 mg/m³ (Rat) 4 h = 67 ppm (Rat) 4 h
Beryllium di(acetate) 543-81-7 (1.1)	-	-	-

Information on toxicological effects

Symptoms No information available.

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

Sensitization May cause sensitization by skin contact.
Mutagenic Effects No information available.
Carcinogenic effects Contains a known or suspected carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Nitric acid 7697-37-2		Group 2A		X
Beryllium di(acetate) 543-81-7	A1	Group 1	Known	X

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organ Effects Respiratory system, Skin.
Other Adverse Effects Harmful: danger of serious damage to health by prolonged exposure through inhalation.
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) 9091 mg/kg
ATEmix (inhalation-dust/mist) 4.5 mg/L
ATEmix (inhalation-vapor) 2233 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 7697-37-2		72: 96 h Gambusia affinis mg/L LC50		

Persistence and Degradability
No information available.

Bioaccumulation/Accumulation
No information available.

Chemical Name	Log Pow
Nitric acid 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	California Hazardous Waste Status

Nitric acid 7697-37-2	Toxic Corrosive Ignitable
Beryllium di(acetate) 543-81-7	Toxic

Section 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
14.4. Packing Group	III
Description	Not applicable.
14.5. Environmental hazard	None
14.6. Special Provisions	None

IATA-DGR

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

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies

EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	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

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	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 7697-37-2	1000 lb			X
Beryllium di(acetate) 543-81-7		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 7697-37-2	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

U.S. State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical Name	California Prop. 65
Beryllium di(acetate) - 543-81-7	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Nitric acid 7697-37-2	X	X	X
Beryllium di(acetate) 543-81-7	X		X

U.S. EPA Label Information

16. OTHER INFORMATION

Revision Date 14-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