

SAFETY DATA SHEET

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

Product identifier**Product Name** CGBA10**Other means of identification****Product Description** 10000 µg/mL Barium**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

Emergency telephone number**Emergency Telephone Number**

Chemtrec 1-800-424-9300 (North America)

Chemtrec +1 703-741-5970 (International)

2. HAZARDS IDENTIFICATION

GHS**Classification**

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 1B

Label Elements**Danger****Hazard statements**

Causes skin irritation

Causes serious eye irritation

May cause cancer

**Appearance** clear / colorless**Physical state** Liquid**Odor** Odorless

Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Wear eye/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
If eye irritation persists: Get medical advice/attention

Skin

IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)**Other Information**

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Nitric acid	7697-37-2	2
Barium Nitrate	10022-31-8	1.9

4. FIRST AID MEASURES**Description of first aid measures**

General Advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin Contact	Wash skin with soap and water.
Inhalation	Immediate medical attention is required. Remove to fresh air. Artificial respiration and/or oxygen may be necessary. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.
Ingestion	Immediate medical attention is required. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Call a physician immediately.
Self-protection of the first aider	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects	Difficulty in breathing.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically

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

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 as required. Do not get in eyes, on skin, or on clothing.

Environmental precautions**Environmental precautions**

Prevent further leakage or spillage if safe to do so. See Section 12 for additional Ecological Information.

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**Storage Conditions**

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/m ³ (vacated) TWA: 2 ppm (vacated) TWA: 5 mg/m ³ (vacated) STEL: 4 ppm (vacated) STEL: 10 mg/m ³	IDLH: 25 ppm TWA: 2 ppm TWA: 5 mg/m ³ STEL: 4 ppm STEL: 10 mg/m ³

Barium Nitrate 10022-31-8	TWA: 0.5 mg/m ³	TWA: 0.5 mg/m ³ (vacated) TWA: 0.5 mg/m ³	IDLH: 50 mg/m ³ TWA: 0.5 mg/m ³
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Appropriate engineering controls

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

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 or 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 and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	clear / colorless
Odor	Odorless
<u>Property</u>	<u>Values</u>
pH - VALUE 1	No data available
Melting point / melting range	No data available
Boiling point / boiling range	100 °C
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Vapor pressure @20 °C (kPa)	No data available
Vapor density	No data available
Relative Density	No data available
Specific gravity - VALUE 1	No data available
Water solubility	Miscible
Partition coefficient: n-octanol/water	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Dynamic viscosity - VALUE 1	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available
<u>Other information</u>	
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 agent

Hazardous decomposition products

Nitrogen oxides (NOx).

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Product Information** Harmful if swallowed Harmful by inhalation**Inhalation** Harmful by inhalation.**Eye Contact** No data available.**Skin Contact** No data available.**Ingestion** Harmful if swallowed.

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Nitric acid - 7697-37-2	-	-	= 2500 ppm (Rat) 1 h = 130 mg/m ³ (Rat) 4 h
Barium Nitrate - 10022-31-8	= 355 mg/kg (Rat)	-	-

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 7697-37-2				X
Barium Nitrate 10022-31-8				X

Reproductive Toxicity No information available.**STOT - single exposure** No information available.**STOT - repeated exposure** No information available.**Target Organ Effects** Respiratory system.**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) 18684 mg/kg**ATEmix (inhalation-dust/mist)** 73.6 mg/l**ATEmix (inhalation-vapor)** 62500 mg/l**12. ECOLOGICAL INFORMATION****Ecotoxicity****Ecotoxicity effects**

Contains 0 % of components with unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Nitric acid 7697-37-2		72: 96 h Gambusia affinis mg/L LC50		

Persistence and Degradability

No information available.

Bioaccumulation

No information available.

Chemical name	Partition coefficient
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 reuse empty containers.

Chemical name	California Hazardous Waste Status
Nitric acid 7697-37-2	Toxic Corrosive Ignitable
Barium Nitrate 10022-31-8	Toxic Ignitable

14. TRANSPORT INFORMATION**IMDG**

14.1. UN-No UN3264
 14.2. Proper shipping name Corrosive liquid, acidic, inorganic, n.o.s
 14.3. Transport hazard class(es) 8
 14.4. Packing Group III
 Description Not applicable
 14.5. Marine Pollutant None
 14.6. Special Provisions None
 No information available Transport No information available
 in bulk according
 to Annex II of MARPOL 73/78 and
 the IBC Code

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. Transport hazard class(es)	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:

Chemical name	CAS No	Weight-%	SARA 313 - Threshold Values %
Nitric acid - 7697-37-2	7697-37-2	2	1.0
Barium Nitrate - 10022-31-8	10022-31-8	1.9	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Not classified
Chronic Health Hazard	Not classified
Fire hazard	Not classified
Sudden Release of Pressure Hazard	No
Reactive Hazard	Not classified

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

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	RQ
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		RQs	
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 does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Nitric acid 7697-37-2	X	X	X
Barium Nitrate 10022-31-8	X	X	X

U.S. EPA Label Information**16. OTHER INFORMATION**

Revision Date 14-Dec-2022

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 SDS