

SAFETY DATA SHEET

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

Product identifier

Product Name GENESIS-ICAL

Other means of identification

Product Description 50 µg/mL S; 10 µg/mL ea: Ce, Cu, Eu, Fe, In, K, Ni, P, Si, Ti, V, Y, Zr; 5 µg/mL ea: Mn, Mo, Na, Sc; 2 µg/mL ea: Be, Li, Sr; 1 µg/mL Ca

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

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 1

Label Elements

Danger

Hazard statements

Causes skin irritation
Causes serious eye damage



Appearance clear / Colorless

Physical state Liquid

Odor Slight chlorine

Precautionary Statements - Prevention

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

Hazards not otherwise classified (HNOC)

- Harmful to aquatic life with long lasting effects
- Harmful to aquatic life

Other Information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Weight-%
Nitric acid	7697-37-2	2
Hydrochloric acid	7647-01-0	2

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

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	Remove to fresh air.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects	No information available.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically
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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 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 Ensure adequate ventilation.

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

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	TWA: 2 ppm STEL: 4 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
Hydrochloric acid 7647-01-0	Ceiling: 2 ppm	Ceiling: 5 ppm Ceiling: 7 mg/m ³	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m ³

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
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Appearance	clear / Colorless
Odor	Slight chlorine
pH - VALUE 1	No data available
Melting point / melting range	No data available
Initial boiling point and boiling range	100 °C / 212 °F
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Vapor pressure @20 °C (kPa)	No data available
Relative 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
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). Hydrogen chloride. Hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Product does not present an acute toxicity hazard based on known information

Inhalation No data available.

Eye Contact No data available.

Skin Contact No data available.

Ingestion No data available.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Nitric acid - 7697-37-2	-	-	= 2500 ppm (Rat) 1 h
Hydrochloric acid - 7647-01-0	238 - 277 mg/kg (Rat)	> 5010 mg/kg (Rabbit)	= 1.68 mg/L (Rat) 1 h

Symptoms related to the physical, chemical and toxicological characteristics

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		Group 1 Group 2A		X
Hydrochloric acid 7647-01-0		Group 3		X

Reproductive Toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

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)	11900 mg/kg
ATEmix (dermal)	250750 mg/kg
ATEmix (inhalation-gas)	28165 ppm
ATEmix (inhalation-dust/mist)	12.5 mg/l
ATEmix (inhalation-vapor)	77.7 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	-2.3

7697-37-2

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
Hydrochloric acid 7647-01-0	Toxic Corrosive Reactive

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. Transport hazard class(es) 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. Transport hazard class(es) 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/NDL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AIIC	Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDL - 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
Hydrochloric acid - 7647-01-0	7647-01-0	2	1.0

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	Not classified
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
Hydrochloric acid	5000 lb			X

7647-01-0				
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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
Hydrochloric acid 7647-01-0	5000 lb	5000 lb	RQ 5000 lb final RQ RQ 2270 kg final RQ

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

This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
Vanadium pentoxide - 1314-62-1	Carcinogen
Beryllium di(acetate) - 543-81-7	Carcinogen
Lithium carbonate - 554-13-2	Developmental
Nickel - 7440-02-0	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Nitric acid 7697-37-2	X	X	X
Hydrochloric acid 7647-01-0	X	X	X

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

Revision Date 10-Jul-2025

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