SAFETY DATA SHEET

Issuing Date 04-Jun-2021 **Revision Date** 04-Jun-2021 **Revision Number** 5

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

Product identifier
Product Name CN-1000-25

Other means of identification
Product Description 1000 µg/mL Cyanide

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

Label Elements

Warning

Hazard statements
May be harmful if swallowed

Appearance clear / colorless **Physical state** Liquid **Odor** Bitter almond

Hazards not otherwise classified (HNOC)
Other Information
No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Sodium cyanide	143-33-9	0.2

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 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 Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

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. Never give anything by mouth to an unconscious person.

Protection of First-aiders 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.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat as cyanide poisoning. Symptoms may be delayed.

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.

Other Information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Cleaning up Dam up. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Prevent product from entering drains.

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
Sodium cyanide 143-33-9	Skin Ceiling: 5 mg/m³	TWA: 5 mg/m³ (vacated) TWA: 5 mg/m³ Skin	IDLH: 25 mg/m³ Ceiling: 4.7 ppm Ceiling: 5 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 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	Bitter almond

Property	**Values**
pH - VALUE 1	No data available
Melting Point/Range	No data available
Boiling point / boiling range	100 °C / 212 °F
Flash Point	Not applicable
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

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 None under normal processing.

Conditions to Avoid
Heat, flames and sparks.

Incompatible materials
Acids. Strong oxidizing agents

Hazardous decomposition products
Cyanides. Hydrogen cyanide.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information Harmful by inhalation Harmful in contact with skin Harmful if swallowed

Inhalation Harmful by inhalation. Effects of overexposure may be delayed due to the slow formation of cyanide anions in the body. Cyanide anions prevent the body from using oxygen and can lead to internal asphyxiation.

Eye Contact May cause irritation.

Skin Contact Harmful in contact with skin. May be absorbed through the skin in harmful amounts.

Symptoms may be delayed.

Ingestion Harmful if swallowed.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium cyanide - 143-33-9	= 5.733 mg/kg (Rat)	= 14.602 mg/kg (Rabbit)	= 0.16 mg/L (Rat) 1 h

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 No information available

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organ Effects Respiratory system, Skin.
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) 2866 mg/kg
ATEmix (dermal) 2500 mg/kg
ATEmix (inhalation-dust/mist) 25 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

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

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium cyanide 143-33-9		0.066 - 0.0852: 96 h Lepomis macrochirus mg/L LC50 flow-through 0.15: 96 h Lepomis macrochirus mg/L LC50 static 0.0391 - 0.0548: 96 h Oncorhynchus mykiss mg/L LC50 static 0.0558 - 0.0586: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.0712 - 0.0936: 96 h Pimephales promelas mg/L LC50 flow-through 0.17: 96 h Pimephales promelas mg/L LC50 static		

Persistence and Degradability
No information available.

Bioaccumulation
No information available.

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	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Sodium cyanide 143-33-9		not otherwise specified		

Chemical name	California Hazardous Waste Status
Sodium cyanide 143-33-9	Toxic

14. TRANSPORT INFORMATION

IMDG

14.1. UN-No UN1935
14.2. Proper shipping name Cyanide solution, n.o.s
14.3. Transport hazard class(es) 6
14.4. Packing Group III
Description Not applicable
14.5. Marine Pollutant None
14.6. Special Provisions None
No information available Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

RID

14.1. UN-No UN1935
14.2. Proper shipping name Cyanide solution, n.o.s
14.3. Hazard Class 6
14.4. Packing Group III
Description Not applicable
14.5. Environmental hazard None
14.6. Special Provisions None

ADR

14.1. UN-No UN1935
14.2. Proper shipping name Cyanide solution, n.o.s
14.3. Hazard Class 6
14.4. Packing Group III
Description Not applicable
14.5. Environmental hazard None
14.6. Special Provisions None

ICAO

14.1. UN-No UN1935
14.2. Proper Shipping Name Cyanide solution, n.o.s
14.3. Hazard Class 6
14.4. Packing Group III
Description Not applicable
14.5. Environmental hazard None
14.6. Special Provisions None

IATA-DGR

14.1. UN-No	UN1935
14.2. Proper shipping name	Cyanide solution, n.o.s
14.3. Transport hazard class(es)	6
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 does not contain any 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 %
Sodium cyanide - 143-33-9	143-33-9	0.2	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
Sodium cyanide 143-33-9	10 lb	X	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
Sodium cyanide 143-33-9	10 lb	10 lb	RQ 10 lb final RQ RQ 4.54 kg final RQ

U.S. State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical name	California Prop. 65
Sodium cyanide - 143-33-9	Male Reproductive

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium cyanide 143-33-9	X	X	X

U.S. EPA Label Information

16. OTHER INFORMATION

Revision Date 04-Jun-2021

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