

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name AACUCN

Product Description 1 000 µg/mL Copper

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Laboratory chemicals

Uses advised against No information available

1.3. 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

1.4. Emergency telephone number

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

Chemtrec +1 703-741-5970 (International)

Europe

See above

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

GHS

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Dermal	Category 4 - (H312)
Chronic aquatic toxicity	Category 1 - (H410)

2.2. Label Elements

Product identifier



Signal word

Warning

Hazard statements

H302 - Harmful if swallowed

H312 - Harmful in contact with skin
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P391 - Collect spillage
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

2.3. Other information

Other hazards Harmful to aquatic life
No information available

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Reg. No
Sodium cyanide	EEC No. Present	143-33-9	0.4	Acute Tox. 2 (H300) Acute Tox. 2 (H330) (EUH032) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available

Full text of H- and EUH-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General Advice	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
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.
Skin Contact	Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
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.
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.
Self-protection of the first aider	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

4.2. Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects Difficulty in breathing.

4.3. Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable Extinguishing Media**

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

Unsuitable Extinguishing Media

No information available

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors

5.3. Advice for firefighters

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

SECTION 6: Accidental release measures**6.1. 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.

Refer to protective measures listed in Sections 7 and 8.

Advice for emergency responders

Ensure adequate ventilation.

6.2. 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.

6.3. Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See Section 12: ECOLOGICAL INFORMATION.

SECTION 7: Handling and storage

7.1. Precautions for Safe Handling**Advice on safe handling**

Ensure adequate ventilation.

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.

7.2. Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep container tightly closed in a dry and well-ventilated place.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

Chemical name	EU	United Kingdom	France	Spain	Germany	
Sodium cyanide 143-33-9		STEL: 5 mg/m³ TWA: 1 mg/m³ TWA: 5 mg/m³ Skin	TWA: 5 mg/m³	S* STEL: 5 mg/m³ TWA: 1 mg/m³	TWA: 3.8 mg/m³ TWA: 2 mg/m³ Ceiling / Peak: 3.8 mg/m³ Ceiling / Peak: 2 mg/m³ Skin TWA: 1 mg/m³	
Chemical name	Italy	Portugal	The Netherlands	Finland	Denmark	
Sodium cyanide 143-33-9	TWA: 1 mg/m³ STEL: 5 mg/m³ Skin	STEL: 5 mg/m³ Ceiling: 5 mg/m³ TWA: 1 mg/m³	Skin STEL: 5 mg/m³ TWA: 1 mg/m³	TWA: 1 mg/m³ STEL: 5 mg/m³ Skin	TWA: 1 mg/m³ Ceiling: 5 mg/m³ Skin	
Chemical name	Sweden	Austria	Switzerland	Poland	Norway	Ireland
Sodium cyanide 143-33-9	LLV: 2 mg/m³ Binding STLV: 4 mg/m³ S*	Skin STEL 5 mg/m³ TWA: 1 mg/m³	Skin STEL: 3.8 mg/m³ STEL: 2 mg/m³ TWA: 3.8 mg/m³ TWA: 2 mg/m³	ceiling: 5 mg/m³ TWA: 1 mg/m³	STEL: 4 ppm STEL: 5 mg/m³ STEL: 10 mg/m³	TWA: 1 mg/m³ TWA: 5 mg/m³ STEL: 5 mg/m³ STEL: 15 mg/m³ Skin

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal protective equipment**Eye/Face Protection**

Wear safety glasses with side shields (or goggles).

Hand Protection

Impervious gloves.

Skin and Body Protection

Impervious clothing. Boots. Chemical resistant apron.

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.

Environmental Exposure Controls Prevent product from entering drains. Do not allow material to contaminate ground water system.

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	clear / Pale yellow
Odor	Bitter almond
<u>Property</u>	<u>Values</u>
pH - VALUE 1	No data available
Melting point / melting range	No data available
Boiling point / boiling range	No data available °C
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
<u>Other information</u>	
VOC Content (%)	No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical Stability

Stable under normal conditions.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

10.3. Possibility of Hazardous Reactions

Hazardous Polymerization

None under normal processing.

Hazardous Reactions

None under normal processing.

10.4. Conditions to Avoid

Heat, flames and sparks.

10.5. Incompatible materials

Acids. Strong oxidizing agents

10.6. Hazardous Decomposition Products

Cyanides. Hydrogen cyanide.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute Toxicity****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.

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

ATEmix (oral) 1,433.2500 mg/kg**ATEmix (dermal)** 1,250.00 mg/kg ppm**ATEmix (inhalation-dust/mist)** 12.50 mg/l**Unknown acute toxicity**

0 % of the mixture consists of ingredient(s) of unknown toxicity.

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Component Information**Skin corrosion/irritation**

No information available.

Serious eye damage/eye irritation

No information available.

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.

SECTION 12: Ecological information

12.1. Toxicity

Very toxic to aquatic life with long lasting effects

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

Chemical name	Algae/aquatic plants	Fish	Crustacea
Sodium cyanide		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	

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil**Mobility in soil**

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects.

Chemical name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Endocrine disrupting potential
Sodium cyanide	Group III Chemical		

SECTION 13: Disposal considerations

13.1. 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.

Other Information

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 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 in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Transport 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

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

International Inventories

All of the components in the product are on the following Inventory lists: U.S.A. (TSCA), Europe (EINECS/ELINCS/NLP), Canada (DSL/NDL), Philippines (PICCS), Japan (ENCS), China (IECSC), Australia (AICS), Korea (ECL).

TSCA	Complies
------	----------

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

Legend

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

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

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

AICS - Australian Inventory of Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

15.2. Chemical Safety Assessment

No information available

SECTION 16: Other information**Full text of R-phrases referred to under sections 2 and 3**

R32 - Contact with acids liberates very toxic gas

R26/27/28 - Very toxic by inhalation, in contact with skin and if swallowed

R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed

Full text of H-Statements referred to under section 3

H302 - Contact with acids liberates very toxic gas

H300 - Fatal if swallowed

H310 - Fatal in contact with skin

H330 - Fatal if inhaled

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

Revision Date 15-Jun-2023

Reason for Revision Not applicable.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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 Safety Data Sheet