

SAFETY DATA SHEET

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

1.1. Product identifier

Product Name AACD1

Product Description 1000 µg/mL: Cd
Contains Cadmium and compounds (as Cd)

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
Phone: 1(800) 669-6799
Email: info@inorganicventures.com

1.4. Emergency telephone number

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

Chemtrec +1 703-741-5970 (International)

Europe	See above
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to
Regulation (EC) No. 1272/2008 [CLP]

GHS

Skin corrosion/irritation	Category 2 - (H315)
Carcinogenicity	Category 1B - (H350)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)
Corrosive to metals	Category 1 - (H290)

2.2. Label elements

Product identifier
Contains Cadmium and compounds (as Cd)

**Signal word**

Danger

Hazard statements

H315 - Causes skin irritation

H318 - Causes serious eye damage

H350 - May cause cancer

H361 - Suspected of damaging fertility or the unborn child

H410 - Very toxic to aquatic life with long lasting effects

H290 - May be corrosive to metals

EUH071 - Corrosive to the respiratory tract

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

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor/physician

P308 + P313 - IF exposed or concerned: Get medical advice/attention

P202 - Do not handle until all safety precautions have been read and understood

2.3. Other hazards

No information available

SECTION 3: Composition/information on ingredients**3.1 Substances**

Chemical name	EC No (EU Index No)	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Nitric acid	231-714-2 ()	7697-37-2	3	(EUH071) Skin Corr. 1A (H314) Ox. Liq. 3 (H272) Acute Tox. 3 (H331)	No data available
Cadmium and compounds (as Cd)	231-152-8 ()	7440-43-9	0.1	Acute Tox. 2 (H330) Muta. 2 (H341) Carc. 1B (H350) Repr. 2 (H361fd) STOT RE 1 (H372) 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**

Inhalation	Remove to fresh air.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

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

Most Important Symptoms and Effects	Asthma-like and/ or skin allergy-like symptoms.
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4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically
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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

Ensure adequate ventilation.

Advice for emergency responders

Ensure adequate ventilation.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage. Dispose of contents/container to an approved waste disposal plant.

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.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

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

7.3. Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union		United Kingdom		France	Spain	Germany DFG
Nitric acid 7697-37-2	STEL: 1 ppm STEL: 2.6 mg/m³		STEL: 1 ppm STEL: 2.6 mg/m³		STEL: 1 ppm STEL: 2.6 mg/m³	STEL: 1 ppm STEL: 2.6 mg/m³	
Cadmium and compounds (as Cd) 7440-43-9	TWA: 0.001 mg/m³		TWA: 0.025 mg/m³ STEL: 0.075 mg/m³		TWA: 0.004 mg/m³	TWA: 0.01 mg/m³ TWA: 0.002 mg/m³	Sk*
Chemical name	Italy MDLPS		Portugal		Netherlands	Finland	Denmark
Nitric acid 7697-37-2	STEL: 1 ppm STEL: 2.6 mg/m³		TWA: 2 ppm STEL: 1 ppm STEL: 2.6 mg/m³		STEL: 1.3 mg/m³	TWA: 0.5 ppm TWA: 1.3 mg/m³ STEL: 1 ppm STEL: 2.6 mg/m³	STEL: 1 ppm STEL: 2.6 mg/m³
Cadmium and compounds (as Cd) 7440-43-9	TWA: 0.001 mg/m³ TWA: 0.004 mg/m³		TWA: 0.001 mg/m³ TWA: 0.004 mg/m³		TWA: 0.004 mg/m³	TWA: 0.004 mg/m³	TWA: 0.001 mg/m³
Chemical name	Sweden		Austria	Switzerland	Poland	Norway	Ireland
Nitric acid 7697-37-2	LLV: 0.5 ppm LLV: 1.3 mg/m³ Binding STLV: 1 ppm Binding STLV: 2.6 mg/m³		STEL 1 ppm STEL 2.6 mg/m³	TWA: 2 ppm TWA: 5 mg/m³ STEL: 2 ppm STEL: 5 mg/m³	TWA: 1.4 mg/m³ STEL: 2.6 mg/m³	TWA: 2 ppm TWA: 5 mg/m³ STEL: 4 ppm STEL: 10 mg/m³	STEL: 1 ppm STEL: 2.6 mg/m³
Cadmium and compounds (as Cd) 7440-43-9	LLV: 0.02 mg/m³ LLV: 0.005 mg/m³			TWA: 0.015 mg/m³ TWA: 0.004 mg/m³ Sk*	TWA: 0.01 mg/m³ TWA: 0.002 mg/m³	TWA: 0.001 mg/m³ STEL: 0.003 mg/m³	TWA: 0.001 mg/m³ TWA: 0.004 mg/m³ STEL: 0.003 mg/m³ STEL: 0.012 mg/m³

Chemical name	European Union	United Kingdom	France	Spain	Germany TRGS
Cadmium and compounds (as Cd) 7440-43-9			0.005 mg/g creatinine - urine (Cadmium) - not critical 0.004 mg/L - blood (Cadmium) - not critical 0.005 mg/L - blood (Cadmium) - not critical	2 µg/g Creatinine (urine - Cadmium not critical) 5 µg/L (blood - Cadmium not critical)	
Component	Italy MDLPS	Portugal	Netherlands	Finland	Denmark
Cadmium and compounds (as Cd) 7440-43-9 (0.1)				20 nmol/L (urine - Cadmium at the end of a working week; time	

Chemical name	Austria	Switzerland	Poland	of day does not matter)	Ireland
Cadmium and compounds (as Cd) 7440-43-9	2.5 µg/g Creatinine - urine (N-Acetylglucosaminidase) - not provided	5 µg/g creatinine (urine - Cadmium no restrictions)			2 µg/g Creatinine (urine - not critical) 2 µg/g Creatinine (urine - Cadmium not critical)

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

Long sleeved clothing.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Environmental Exposure Controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Appearance

clear / colorless

Odor

Odorless

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

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

None known.

10.5. Incompatible materials

Bases Cyanides

10.6. Hazardous decomposition products

Nitrogen oxides (NO_x).

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

Product Information	Product does not present an acute toxicity hazard based on known or supplied information.
Inhalation	No data available.
Eye Contact	No data available.
Skin Contact	No data available.
Ingestion	No data available.

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

ATEmix (inhalation-dust/mist) 16.7000 mg/l

ATEmix (inhalation-vapor) 88.333 mg/l

Unknown acute toxicity

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

Chemical name	European Union
Cadmium and compounds (as Cd)	Carc. 1B

Reproductive Toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
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
Cadmium and compounds (as Cd)		LC50: =0.003mg/L (96h, Oncorhynchus mykiss) LC50: =0.006mg/L (96h, Oncorhynchus mykiss) LC50: =0.002mg/L (96h, Cyprinus carpio) LC50: =4.26mg/L (96h, Cyprinus carpio) LC50: =0.24mg/L (96h, Cyprinus carpio) LC50: =21.1mg/L (96h, Lepomis macrochirus) LC50: =0.016mg/L (96h, Oryzias latipes) LC50: 0.0004 - 0.003mg/L (96h, Pimephales promelas)	EC50: =0.0244mg/L (48h, Daphnia magna)

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

Chemical name	Partition coefficient
Nitric acid	-2.3

12.4. Mobility in soil

Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

Chemical name	PBT and vPvB assessment
Nitric acid	The substance is not PBT / vPvB
Cadmium and compounds (as Cd)	PBT assessment does not apply

12.6. Other adverse effects

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	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 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. 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

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/NDSL), Philippines (PICCS), Japan (ENCS), China (IECSC), Australia (AICS), Korea (ECL).

TSCA	Complies
EINECS/ELINCS	Complies
DSL/NDSL	Complies
PICCS	Complies
ENCS	Complies
IECSC	Complies
AIC	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

No information available

Full text of H-Statements referred to under section 3

H272 - May intensify fire; oxidizer

H314 - Causes severe skin burns and eye damage

H330 - Fatal if inhaled

H331 - Toxic if inhaled

H341 - Suspected of causing genetic defects

H350 - May cause cancer

H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child

H372 - Causes damage to organs through prolonged or repeated exposure

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

Revision Date 07-Aug-2025

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