



Material Data Safety Sheet

AutoGen, Inc.
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Date revised: 02-22-2024

Emergency Telephone Number: 800.633.8253 (USA & Canada) 801.629.0667
International

Agent: PERS

Section 1 – Product and Company Information

Product Name: 102/104/105/106/110/202/211/210/301/401/405/502/601
Cartridges

Recommended use: Laboratory Chemicals

Company: AutoGen, Inc.

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Section 2 – Hazards Identification

GHS Classification:

Flammable liquids: Category 2

Acute toxicity (Oral): Category 4

Acute toxicity (inhalation): Category 4

Skin corrosion: Category 1C

Serious eye damage: Category 1

Respiration sensitization: Category 1

Specific target organ systemic: Category 3 (Central nervous system)

Toxicity-single exposure

Acute aquatic toxicity: Category 3

GHS Label element:

Hazard pictograms:





Signal Word: Danger

Hazard Statements:

H225 Highly Flammable liquid and vapour.

H302+H332 Harmful if swallowed. In contact with skin or if inhaled.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage

H402 Harmful to aquatic life

Precautionary Statements:

Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P305+P351+P338 if in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P311 if exposed or consumed: Call a poison center or doctor/ physician.

Potential Health Effects:

Aggravated Medical Condition: None known.

Symptoms of Overexposure: No information available.

Section 3 - Composition/Information on Ingredients

Substance/Mixture: Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
ethanol	64-17-5	50~80
2-Propanol	67-63-0	60~80
Guanidine Hydrochloride	50-01-1	30~50

Section 4- First Aid Measures

General advice:

Move out of the dangerous area. Show this material safety data sheet to the doctor in attendance.

If inhaled:



If unconscious, place in a recovery position and seek medical advice. Keep the respiratory tract clear. If symptoms persist, call a physician.

In case of skin contact:

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.

In case of eye contact:

Small amounts splashed into eyes can cause irreversible tissue damage and blindness. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Remove contact lenses. Protect unharmed eye.

If swallowed:

If accidentally swallowed, obtain immediate medical attention. Rinse mouth with water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

Harmful if swallowed or if inhaled. Causes serious eye damage. Causes severe burns.

Note to Physician:

No information available

Section 5- Fire Fighting Measures

Suitable Extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards during firefighting:

Don't allow run-off from firefighting to enter drains or water courses. Exposure to decomposition products may be a hazard to health.

Hazardous combustion products:

Carbon oxides. Sulfur oxides

Specific extinguishing methods:

In the event of fire and/or explosion don't breathe fumes. Use a water spray to cool fully closed containers.

Special protective equipment for fire-fighters:

Wear self-contained breathing apparatus for firefighting if necessary

Section 6 – Accidental Release Measures



Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid breathing dust/fume/gas/mist/vapors/spray. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions:

Prevent products from entering drains. Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up:

Contain spillage, and then collect with non-combustible absorbent material. (e.g. sand, earth, diatomaceous earth, vermiculite) and placed in a container for disposal according to local/national regulations (see section 13.). Unsuitable cleaning agents sodium hypochlorite.

Section 7 – Handling and Storage

Advice on safe handling:

Avoid formation of aerosol. Don't breathe vapors/dust. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Open the drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage:

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

Materials to avoid:

Don't store together with oxidizing and self-igniting products

Section 8 – Exposure controls/Personal Protection

Ingredients with workplace control parameters:

Ingredients	CAS-No.	Value type (Form of exposure)	Control Parameters/ Permissible concentration	Basis
ethanol	64-17-5	TWA	1000 ppm 1900mg/m ³	NIOSH REL
		TWA	1000 ppm	OSHA Z-1

			1900 mg/m ³	
		TWA	1000 ppm 1900 mg/m ³	OSHA P0
		STEL	1000 ppm	ACGIH
2-Propanol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m ³	NIOSH REL
		ST	500 ppm 1225 mg/m ³	NIOSH REL
		TWA	400 ppm 980 mg/m ³	OSHA Z-1
		TWA	400 ppm 980 mg/m ³	OSHA P0
		STEL	500 ppm 1225 mg/m ³	OSHA P0

Biological occupational exposure limits:

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
2-Propanol	67-63-0	Acetone	Urine	End of shift at end of workweek	40 mg/l	ACGIH BEI

Personal protective equipment

Respiratory protection:

In the case of vapor formation use a respirator with an approved filter.

Hand protection remarks:

The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact)

Material:

Protective gloves

Eye protection:

Tightly fitting safety goggles. Wear a face-shield and protective suit for abnormal processing problems. Don't wear contact lenses. Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection:

Choose body protection according to the amount and concentration of the dangerous substance at the workplace. Acid-resistant protective clothing. Footwear that protects against chemicals. Workers should wear antistatic footwear.

Hygiene measures:



Keep away from food and drink. Wash hands before breaks and at the end of workday. Ensure adequate ventilation, especially in confined areas. Avoid contact with the skin and the eyes. When using, do not eat, drink or smoke.

▪ **Section 9 – Physical and Chemical Properties**
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Appearance: liquid
Color: No data available.
Odor: No data available.
Odor Threshold: No data available.
pH: No data available.
Melting point/range: No data available.
Boiling point/range: No data available.
Flash point: No data available.
Evaporation rate: No data available.
Burning rate: No data available.
Upper explosion limit: No data available.
Lower explosion limit: No data available.
Vapor pressure: No data available.
Relative vapor density: No data available.
Relative density: No data available.
Density: No data available.
Solubility: No data available.
Water solubility: No data available.
Solubility in other solvents: No data available.
Partition coefficient n-octanol/water: No data available.
Auto ignition temperature: No data available.
Thermal decomposition: No data available.
Viscosity: No data available.
Viscosity, dynamic: No data available.
Viscosity, kinematic: No data available.
Explosive properties: No data available.
Oxidizing properties: No data available.

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Section 10 – Stability and Reactivity

Reactivity: No decomposition if stored and applied as directed.

Chemical stability: No decomposition if stored and applied as directed.

Possibility of hazardous reactions: Stable under recommended storage conditions.

Conditions to avoid: Heat, Flames and sparks.

Incompatible materials: No data available

Hazardous decomposition products: No decomposition if stored and applied as directed.

Section 11 – Toxicological Information

Acute toxicity

Product:

Acute oral toxicity: No data available

Acute inhalation toxicity: No data available

Acute dermal toxicity: No data available

Ingredients:

Ethanol

Acute oral toxicity: LD50 Oral (Rat): 10470 mg/kg

Acute inhalation toxicity: LC50 (Rat): 20000 ppm, Exposure time: 10 h

2-Propanol

Acute oral toxicity: LD50 Oral (Rat): 5045 mg/kg

Acute inhalation toxicity: LD50 Dermal (Rabbit): 12800 mg/kg

Guanidine hydrochloride

Acute oral toxicity: LD50 Oral(Rat): 1120 mg/kg

Skin corrosion/irritation

Product:

Extremely corrosive and destructive to tissue. Causes skin burns.

Ingredients:

2-Propanol:

Species: Rabbit

Result: Mild skin irritation

Serious eye damage/eye irritation

Product:

Remarks: May cause irreversible eye damage.

Ingredients:

Ethanol

Result: Eye irritation

2-Propanol:

Species: Rabbit

Exposure time: 24h

Result: Eye irritation

Respiratory or skin sensitizationProduct

Remarks: May cause sensitization by inhalation and skin contact.

Germ Cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

STOT-single exposureIngredients:**2-Propanol**

Assessment: May cause drowsiness or dizziness.

STOT-repeated exposure

No data available

Aspiration toxicity

No data available

Further informationProduct

Remarks:

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV values may cause narcotic effects. Solvents may degrease the skin.

Section 12 – Ecological Information

Eco toxicityProduct

Toxicity to fish: No data available

Toxicity to algae: No data available

Toxicity to bacteria: No data available

Ingredients**2-Propanol**

Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): 9640 mg/l,

Exposure time: 96 h



Toxicity to algae: EC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)):
2000 mg/l, Exposure time: 72 h

Persistence and degradability

Ingredients:

Guanidine hydrochloride

Biodegradability: Method: OECD Test Guideline 301C

Remarks:

According to the results of tests of biodegradability. This product is not readily biodegradable.

Bio accumulative potential

Product

Bioaccumulation: No data available

Partition coefficient n-octanol/water: No data available

Ingredients

Guanidine hydrochloride

Partition coefficient n-octanol/water: log Pow: ca.-1.7 (20°C)

Mobility in soil

No data available

Other adverse effects

No data available

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Section 13 – Disposal Considerations

Disposal Methods

Waste from residues:

The product should not be allowed to enter drains, water courses or the soil. Send to a licensed waste management company. Dispose of as hazardous waste in compliance with local and national regulations. Dispose of contents/container in accordance with local regulation.

Contaminated packaging:

Dispose of an unused product. Don't re-use empty containers.

Section 14 – Transport Information

IATA-DGR

UN/ID No.: 2924

Proper shipping name: Flammable liquid, corrosive, n.o.s.(ethanol)

Class: 3



Subsidiary risk: 8
Packing group: II
Labels: Flammable Liquids, Corrosive

IMDG-Code

UN number: 2924
Proper shipping name: Flammable liquid, corrosive, n.o.s.(ethanol)
Class: 3
Subsidiary risk: 8
Packing group: II
Labels: 3(8)
EmS Code: F-E, S-C ,
Marine pollutant: no

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

No data available

Domestic regulation

49 CFR

UN/ID/NA No.: 2924
Proper shipping name: Flammable liquid, corrosive, n.o.s.(ethanol)
Class: 3
Subsidiary risk: 8
Packing group: II
Labels: Class 3 - Flammable Liquid, Class 8 - Corrosive
ERG Code: 132
Marine pollutant: no

Special precaution for user:

For personal protection see section 8.

Section 15 – Regulatory Information

TSCA List: Not relevant.

OSHA Hazards: Toxic by ingestion, Respiratory sensitizer, Sever skin irritant. Server eye irritant. Server respiratory irritant.

EPCRA-Emergency Planning and Community Right-to-Know

SARA 311/312 Hazards: Fire Hazard. Acute Health Hazard

SARA 302:

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.



SARA 313:

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Prop 65

Warning! This product contains a chemical known in the State of California to cause cancer

Ethanol 64-17-5

Warning! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm

• Ethanol 64-17-5

Section 16 – Other Information

This bulletin is for your guidance and is based upon information and tests believed to be reliable. AutoGen makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages thereto. The data are offered solely for your consideration, investigation, and verification. These suggestions should not be confused with state, municipal, or insurance requirements, or with national safety codes and constitute no warranty. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state, and local regulations.