



1. Identification

Product identifier TSL-601-5

Other means of identification

Description Patulin in Acetonitrile

Synonyms Laboratory standard

Recommended use Reference standard for analytical use.

Recommended restrictions Use in accordance with manufacturer's recommendations.

Manufacturer/Supplier information

Company Name Trilogy Analytical Laboratory, Inc

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Washington, MO 63090

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2. Hazard(s) identification

GHS classification is accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2), H225
Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 4), H332
Acute toxicity, Dermal (Category 4), H312
Eye irritation (Category 2A), H319



GHS label elements

Signal Word Danger

Hazard statement(s) H225 Highly flammable liquid and vapor.
H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.
H319 Causes serious eye irritation

Precautionary statement(s) P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fumes/gas/mist/vapors/spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.



P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing.
P301 & P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 & P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403 + P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) None

3. Composition/Information on ingredients

Mixtures

Chemical name	CAS number	%
Patulin	149-29-1	< 0.1
Acetonitrile	75-05-8	99.9

4. First aid measures

General advice

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

If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

Most important known symptoms and effects are described in section 2.



Indication of immediate medical attention and special treatment needed

No data available

5. Firefighting measures

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

Special hazards arising from the substance or mixture

No data available

Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

Further information Use water spray to cool unopened containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. Handling and storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: 2 - 8 °C. Containers which are opened must be carefully resealed and kept upright to prevent leakage.



8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Acetonitrile (CAS 75-05-8)	TWA	70 mg/m ³ (40 ppm)

US. ACGIH Threshold Limit Values

Components	Type	Value
Acetonitrile (CAS 75-05-8)	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits

Components	Type	Value
Acetonitrile (CAS 75-05-8)	TWA	34mg/m ³ (20 ppm)

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

- Eye/face protection** Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- Skin protection** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
- Body Protection** Use impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- Respiratory protection** Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. Physical and chemical properties

Appearance

Physical state	Liquid
Color	Clear
Odor	Mild solvent odor
Odor threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Initial boiling point/range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Vapor pressure	No data available
Relative density	No data available
Water solubility	Completely miscible
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	Not explosive
Oxidizing properties	The mixture is not classified as oxidizing

10. Stability and reactivity

Reactivity No data available

Chemical stability Stable under recommended storage conditions

Possibility of hazardous reactions

Vapors may form explosive mixture with air.

Conditions to avoid Heat, flames and sparks. Extremes of temperature and direct sunlight

Incompatible materials Acids, bases, oxidizing agents, reducing agents, and alkali metals.

Hazardous decomposition products

Other decomposition products - No data available
Hazardous decomposition products formed under fire conditions.
Carbon oxides, Nitrogen oxides (NO_x)
In the event of fire: see section 5

11. Toxicological information

Acute toxicity

LD50 Oral - Rat - male - 1,320 - 6,690 mg/kg

LC50 Inhalation - Mouse - 4 h - 3587 ppm (OECD Test Guideline 403)

LC50 Inhalation - Rat - 4 h - 26.8 mg/l

LD50 Dermal - Rabbit - male and female - > 2,000 mg/kg (OECD Test Guideline 402)

Skin corrosion/irritation

Skin – Rabbit

Result: No skin irritation

(OCED Test Guideline 404)

Serious eye damage/eye irritation

Eyes – Rabbit

Result: Irritating to eyes.

(OECD Test Guideline 405)

Respiratory or skin sensitization

Buehler Test – Guinea pig

Did not cause sensitization on laboratory animals

(OCED Test Guideline 406)

Germ cell mutagenicity

Hamster

Ovary

Result: negative

Mutation in mammalian somatic cells

Ames test

S. typhimurium

Result: Not mutagenic in Ames Test

Hamster

Ovary

Result: Equivocal evidence

Sister chromatid exchange



Mutagenicity (micronucleus test)

Mouse

Result: Positive results were obtained in some in vivo tests

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

NTP Report on Carcinogens

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP

Reproductive toxicity No data available
Animal testing did not show any effects on fertility.

Specific target organ toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard No aspiration toxicity classification.

Additional Information: RTECS: AL7700000

Treat as cyanide poisoning. Always have on hand a cyanide first-aid kit, together with proper instructions. The onset of symptoms is generally delayed pending conversion to cyanide. Nausea, vomiting, diarrhea, headache, dizziness, rash, cyanosis, excitement, depression, drowsiness, impaired judgment, lack of coordination, stupor, death. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological information

Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 1,640.00 mg/l - 96 h
NOEC - Oryzias latipes - 102 mg/l - 21 d

Toxicity to daphnia and other aquatic invertebrates

EC50 – Daphnia magna (Water flea) – 3,600 mg/l – 48 h
(OCED Test Guideline 202)
NOEC – Daphna magna (Water flea) – 160 mg/l – 21 d



Persistence and degradability

Biodegradability	Result: 84% - Readily biodegradable (OCED Test Guideline 301C)
Bio accumulative potential	No bioaccumulation is to be expected (log Pow <= 4).
Mobility in soil	Not expected to adsorb on soil.
Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Other adverse effects	Avoid release to the environment.

13. Disposal considerations

Waste treatment methods

Product	Burn in a chemical incinerator equipped with an afterburner and scrubber and exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated packaging	Dispose of as unused product.

14. Transport information

DOT (US)

UN Number: 1648 Class: 3 Packing Group: II
Proper Shipping Name: Acetonitrile
DOT regulated small quantity provisions apply (see 49CFR173.4)

IMDG

UN Number: 1648 Class: 3 Packing Group: II EMS-No: F-E, S-D
Proper Shipping Name: Acetonitrile

IATA

UN Number: 1648 Class: 3 Packing Group: II
Proper Shipping Name: Acetonitrile

15. Regulatory information

SARA 302 Components

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

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Acetonitrile CAS-No. 75-05-8 Revision Date 2007-07-01



SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard

Massachusetts Right To Know

Acetonitrile CAS-No. 75-05-8 Revision Date 2007-07-01

Pennsylvania Right To Know Components

Acetonitrile CAS-No. 75-05-8 Revision Date 2007-07-01

New Jersey Right To Know Components

Acetonitrile CAS-No. 75-05-8 Revision Date 2007-07-01

California Prop. 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. Other information**HMIS Rating**

Health hazard: 2
Chronic Health Hazard:
Flammability: 3
Physical Hazard 0

NFPA Rating

Health hazard: 2
Fire Hazard: 3
Reactivity Hazard: 0