

Safety Data Sheet - Patulin



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

1.1 Product identifier

Trade name	Patulin – 100 µg/mL in acetonitrile
Registration number (REACH)	not relevant (mixture)
Item number	VE00008367

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

Relevant identified uses	Laboratory and analytical purposes
Uses advised against	Do not use in products intended for contact with food. Do not use for private purposes (household).

1.3 Details of the supplier of the safety data sheet

LVA GmbH
Magdeburggasse 10
3400 Klosterneuburg
Austria
Telephone: +43 2243 26622-0
Mail: service@lva.at
Website: www.lva.at

Manufacturer

Country	Name	Street	Postal code/city	Telephone	Mail
Austria	LVA GmbH	Magdeburggasse 10	3400 Klosterneuburg	+43 2243 26622-0	service@lva.at

1.4 Emergency number

Emergency information servicet	+43 2782 803 0 This number is only available during the following business hours: Mon - Thu 09:00 - 16:00, Fri 09:00 - 12:00, GMT+1
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Poison Control Center

Country	Name	Telephone
Austria	Poison Information Center	+43 1 406 43 43 (24h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Cut	Hazard class	Category	Hazard class and category	Hazard statement
2.6	Flammable liquids	2	Flam. Liq. 2	H225
3.1O	Acute toxicity (oral)	4	Acute Tox. 4	H302
3.1D	Acute toxicity (dermal)	4	Acute Tox. 4	H312
3.1I	Acute toxicity (inhalation)	4	Acute Tox. 4	H332
3.3	Serious eye damage/eye irritation	2	Eye Irrit. 2	H319

Full text of abbreviations in SECTION 16.

The most significant harmful physico-chemical effects, effects on human health, and the environment:
The product is flammable and can be ignited by potential ignition sources.

2.2 Label elements

Labeling according to Regulation (EC) No. 1272/2008 (CLP)

Signal word

Danger

Pictograms
GHS02, GHS07



Hazard statements

H225

Highly flammable liquid and vapor.

H302+H312+H332

Harmful if swallowed, in contact with skin, or if inhaled.

H319

Causes serious eye irritation.

Safety precautions

P210

Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

P233

Keep container tightly closed.

P261

Avoid breathing dust/fume/gas/mist/vapors/spray.

P280

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

P312

Call a POISON CENTER/doctor if you feel unwell.

P370+P378

In case of fire, use sand, carbon dioxide, or powder for extinguishing.

P403+P235

Store in a well-ventilated place. Keep cool.

P501

Dispose of contents/container in accordance with local regulations.

Hazardous components for labeling

Acetonitrile

2.3 Other hazards

Results of PBT and vPvB assessment

This mixture does not contain substances assessed as PBT or vPvB substances.



SECTION 3: Composition/Information on Ingredients

3.1 Substances

Not applicable (Mixture)

3.2 Mixtures

Description of the mixture

Substance Name	Identifier	Weight-%	Classification according to GHS	Pictograms
Acetonitrile	CAS-Nr. 75-05-8 EG-Nr. 200-835-2 Index-Nr. 608-001-00-3	≥ 90	Flam. Liq. 2 / H225 Acute Tox. 4 / H302 Acute Tox. 4 / H312 Acute Tox. 4 / H332 Eye Irrit. 2 / H319	 

Full wording of abbreviations in SECTION 16.

SECTION 4: First Aid Measures

4.1 Description of First Aid Measures

General Comments

Affected individuals must not be left unattended. Those involved in the accident must be removed from the danger zone. Affected persons should be placed calmly, covered, and kept warm. Contaminated or soaked clothing should be removed immediately. In case of discomfort or uncertainty, medical advice should be sought. If unconscious, the recovery position should be used and nothing should be administered orally.

After Inhalation

If breathing is irregular or has stopped, seek medical assistance immediately and begin first aid measures. Ensure the person gets fresh air.

After Skin Contact

Wash with plenty of water and soap.

After Eye Contact

If present, remove contact lenses if possible. Continue rinsing. Keep eyelids open and rinse thoroughly with clean, running water for at least 10 minutes.

After Ingestion

Rinse mouth with water (only if the person is conscious). DO NOT induce vomiting.

4.2 Most Important Acute and Delayed Symptoms and Effects

No symptoms and effects known to date.

4.3 Indications of Immediate Attention or Special Treatment Needed

None

SECTION 5: Firefighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media

Water spray, alcohol-resistant foam, BC powder, carbon dioxide (CO₂)

Unsuitable Extinguishing Media

Water jet

5.2 Special Hazards Arising from the Substance or Mixture

Inadequate ventilation and/or use can result in the formation of explosive or easily ignitable vapor-air mixtures. Solvent vapors, which are heavier than air, accumulate at the ground level. There is a risk of flammable substances or mixtures in areas not reached by ventilation, such as unventilated low-lying areas like pits, channels, cellars, and shafts.

Hazardous Combustion Products

Nitrogen oxides (NO_x), carbon monoxide (CO), carbon dioxide (CO₂)

5.3 Advice for Firefighters

Do not inhale explosion and fire gases. Coordinate firefighting measures according to the surroundings. Avoid introducing extinguishing water into drains and water bodies. Collect contaminated extinguishing water separately. Conduct firefighting with the usual precautions from a safe distance.

SECTION 6: Measures for Accidental Release

6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

Non-emergency trained personnel

Evacuate personnel to safety.

Emergency responders

Wear respiratory protection in case of exposure to vapors, dust, aerosols, and gases.

6.2 Environmental Precautions

Prevent entry into sewers or surface water and groundwater. Retain and dispose of contaminated washing water

6.3 .Methods and Material for Containment and Cleaning

Guidance on how spilled materials can be contained

Covering drains

Guidance on cleaning in case of spills

Absorb with absorbent material (e.g., cloths, fleece). Collect spilled quantities: sawdust, diatomaceous earth, sand, universal absorbent

Suitable containment techniques

Use of absorbent materials.

Further information regarding spills and releases

Place in suitable containers for disposal. Ventilate the affected area.

6.4 Reference to Other Sections

Hazardous combustion products: see Section 5. Personal protective equipment: see Section 8. Incompatible materials: see Section 10. Disposal information: see Section 13.

SECTION 7: Handling and Storage

7.1 Handling and Safety Measures

Recommendations

Measures to prevent fires, aerosol, and dust formation

Use local and general ventilation. Avoid ignition sources and keep them away - no smoking. Take precautions against electrostatic discharges. Use only in well-ventilated areas. Prevent vapors from entering basements, sewers, and pits due to explosion hazards. Ground containers and equipment being filled. Use explosion-proof electrical equipment, ventilation systems, and lighting. Use only spark-free tools.

Specific instructions/information

In areas not covered by ventilation, such as unventilated, low-lying areas like pits, channels, cellars, and shafts, the presence of flammable substances or mixtures is expected. Vapors heavier than air spread on the ground and can form an explosive mixture with air.

General workplace hygiene instructions

Please wash your hands after use. Eating, drinking, or smoking is not allowed in work areas. Before entering areas where food is consumed, remove contaminated clothing and protective equipment. Do not store food and drinks together with chemicals. Do not use containers for chemicals that are normally used for food. Keep food, drinks, and animal feed away from chemicals.

7.2 Conditions for Safe Storage Considering Incompatibilities

Encounter of Risks of the Following Type

Explosive atmospheres

Keep the container tightly closed in a well-ventilated area. Provide local and general ventilation. Keep it cool and protect it from direct sunlight.

Risks due to flammability

Keep away from ignition sources - no smoking. Avoid heat, hot surfaces, sparks, open flames, and other potential ignition sources. It is important to take precautions against electrostatic discharges and protect from sunlight.

Requirements for Ventilation

Please store hazardous substances that release hazardous vapors in ideally places with continuous extraction. Utilize both local and general ventilation systems. Ensure that containers and filling systems are grounded.

Suitable Packaging

Only approved packaging (e.g., according to ADR) may be used.

7.3 Specific End Uses

For a general overview, refer to Section 16.

SECTION 8: Exposure Controls/Personal Protection

8.1 Parameters to Monitor

Occupational exposure limits (workplace exposure limits)

Country	Substance	CAS-No.	Identifier	LTEL [ppm]	LTEL [mg/ms]	STEL [ppm]	STEL [mg/ms]	MiC [ppm]	MiC [mg/ms]	Notes	Source
AT	Acetonitrile	75-05-8	MAK	40	70	160	280				GKV
EU	Acetonitrile	75-05-8	IOELV	40	70						2006/15/EG

Note

STEL

Short-term exposure limit (value not to be exceeded over a 15-minute period unless otherwise specified)

MiC

Maximum instantaneous concentration not to be exceeded (ceiling value)

LTEL

Time-Weighted Average (long-term exposure limit for an 8-hour period)

8.2 Limitation and Monitoring of Exposure

Appropriate Engineering Controls

General ventilation.

Personal Protective Equipment (PPE)



Eye/Face Protection

Wear safety goggles/face shield.

Hand Protection

It is recommended to use chemical-resistant gloves according to EN 374 and check for tightness and impermeability before use. It is advisable to confirm the suitability of the specified protective gloves for specific applications directly with the manufacturer.

Other Protective Measures

Take recovery breaks to allow skin regeneration. Wash hands thoroughly after use.

Limitation and Monitoring of Environmental Exposure

Use containers that are suitable to prevent environmental contamination. Prevent entry into sewers as well as surface water and groundwater.

SECTION 9: Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical State	Liquid
Color	Colorless
Odor	Characteristic

Other Safety Characteristics

pH	Not determined
Melting Point/Freezing Point	-46 °C
Boiling Point and Range	81 °C
Flash Point	5 °C
Evaporation Rate	Not determined
Flammability (solid, gas)	Not relevant, (liquid)

Explosion Limits

Lower Explosion Limit (LEL)	4,4% by volume
Upper Explosion Limit (UEL)	16% by volume
Vapor Pressure	97 hPa at 20 °C
Density	Not determined
Vapor Density	No information available
Relative Density	No information available

Solubility

Water Soubility	Miscible in all proportions
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Partition Coefficient

n-Octanol/Water (log KOW)	No information available
Autoignition Temperature	525 °C
Viscosity	Not determined
Exlosive Properties	None
Oxidizing Properties	None

9.2 Other Information

There are no additional details available

SECTION 10: Stability and Reactivity

10.1 Reactivity

Regarding incompatibilities: Please refer to sections "Conditions to Avoid" and "Incompatible Materials" below. The mixture contains reactive substances and carries the risk of inflammation.

Upon heating:

Risk of ignition

10.2 Chemical Stability

See "Conditions to Avoid" below.

10.3 Possibility of Hazardous Reactions

There are no known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames, and other sources of ignition. No smoking.

Instructions on how to prevent fires or explosions

Use electrical equipment, ventilation systems, and lighting that are explosion-proof. Use only tools that do not generate sparks. Take precautions against electrostatic discharge.

10.5 Incompatible Materials

Oxidizing agents.

10.6 Hazardous Decomposition Products

There are no known hazardous decomposition products that could reasonably occur during use, storage, spillage, or heating. Refer to Section 5 regarding hazardous combustion products.

SECTION 11: Toxicological Information

11.1 Information on Toxicological Effects

There are no test data available for the complete mixture.

Classification Procedure

The classification procedure for the mixture is based on the components of the mixture (additivity formula).

Classification according to GHS (1272/2008/EG, CLP)

Acute Toxicity

Harmful if swallowed, in contact with skin, or if inhaled.

Estimated Acute Toxicity Estimate (ATE) of Components in the Mixture

Substance Name	CAS-No.	Route of Exposure	ATE
Acetonitrile	75-05-8	oral	500 mg/kg
Acetonitrile	75-05-8	dermal	1.250 mg/kg
Acetonitrile	75-05-8	Inhalation (vapor)	11 mg/l/4h

Skin Corrosion/Irritation

Not classified as corrosive/irritant to the skin.

Serious Eye Damage/Eye Irritation

Causes serious eye irritation.

Sensitization of Respiratory Organs or Skin

Not classified as a respiratory or skin allergen.

Germ Cell Mutagenicity

Not classified as a germ cell mutagen.

Carcinogenicity

Not classified as carcinogenic.

Reproductive Toxicity

Not classified as reproductive toxicant.

Specific Target Organ Toxicity - Single Exposure

Not classified as specific target organ toxicant (single exposure).

Specific Target Organ Toxicity - Repeated Exposure

Not classified as specific target organ toxicant (repeated exposure).

Aspiration Hazard

Not classified as an aspiration hazard.

SECTION 12: Ecological Information

12.1 Toxicity

Not classified as hazardous to the aquatic environment.

12.2 Persistence and Degradability

No data available.

12.3 Bioaccumulation Potential

No data available.

12.4 Mobility in Soil

No data available.

12.5 Results of PBT- und vPvB-Assessment

No data available.

12.6 Other Adverse Effects

Potential for endocrine disruption

None of the components are listed.

SECTION 13: Disposal Considerations

13.1 Waste Treatment Methods

Relevant Information for Waste Treatment

Recovery/regeneration of solvents.

Information Relevant to Waste Disposal via Wastewater

Prevent entry into the sewer system and avoid release into the environment. Consult special instructions or the safety data sheet.

Waste Treatment of Containers/Packaging

This is hazardous waste, which should only be transported in approved packaging (e.g., according to ADR). Empty packaging can be recycled, while contaminated packaging should be treated as the waste substance itself.

Remarks

Please observe relevant national or regional regulations. Waste should be sorted in a way that allows local or national disposal facilities to treat it accordingly.

SECTION 14: Transport Information

14.1 UN-Number

ADR/RID/ADN	1648
IMDG-Code	1648
ICAO-TI	1648

14.2 Proper UN Shipping Name

ADR/RID/ADN	ACETONITRIL
IMDG-Code	ACETONITRILE
ICAO-TI	Acetonitrile

14.3 Transport Hazard Classes

ADR/RID/ADN	3
IMDG-Code	3
ICAO-TI	3

14.4 Packing Group

ADR/RID/ADN	II
IMDG-Code	II
ICAO-TI	II

14.5 Environmental Hazards

Not environmentally hazardous according to the dangerous goods regulations.

14.6 Special Precautions for User

The dangerous goods regulations (ADR) must also be observed within the plant premises.

14.7 Transport in Bulk According to Annex II of MARPOL and the IBC Code

The cargo is not transported in bulk.

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Information According to the Various UN Model Regulations

Transport of Dangerous Goods by Road, Rail, or Inland Waterways (ADR/RID/ADN)

UN-Number	1648
Proper Shipping Name	ACETONITRILE
Class	3
Classification Code	F1
Packing Group	II
Hazard Label	3



Exempt Quantities (EQ)	E2
Limited Quantities (LQ)	1 L
Transport Category(TC)	2
Tunnel Restriction Code (TRC)	D/E
Hazard Identification Number	33

International Maritime Dangerous Goods Code (IMDG)

UN-Number	1648
Proper Shipping Name	ACETONITRILE
Class	3
Marine Pollutant	-
Packing Group	II
Hazard Label	3



Exempt Quantities (EQ)	E2
Limited Quantities (LQ)	1 L
Emergency Schedules (EmS)	F-E, S-D
Stowage Category	B

International Civil Aviation Organization (ICAO-IATA/DGR)

UN-Number	1648
Proper Shipping Name	Acetonitrile
Class	3
Packing Group	II
Hazard Label	3



Exempt Quantities (EQ)	E2
Limited Quantities (LQ)	1 L

SECTION 15: Regulatory Information

15.1 Safety, Health, and Environmental Regulations/Specific Legislation for the Substance or Mixture

Relevant Provisions of the European Union (EU)

Restrictions According to REACH, Anhang XVII

Substances Subject to Restrictions (REACH, Anhang XVII)

Substance Name	Listing Information	CAS-No.	Number
Patulin in acetonitrile	This product meets the classification criteria according to Regulation No. 1272/2008/EC		3
Acetonitrile	Flammable/self-igniting (pyrophoric)		40

List of Substances Subject to Authorization (REACH Annex XIV) / SVHC Candidate List

No component is listed

Regulation 166/2006/EC on the Establishment of a European Pollutant Release and Transfer Register (PRTR)

No component is listed

Directive 2000/60/EC Establishing a Framework for Community Action in the Field of Water Policy (WFD)

No component is listed

National Regulations (Austria)

Regulation on Flammable Liquids (VbF)

VbF (Group and Hazard Class): A1 (flammable liquids of Group A, Hazard Class I)

National Regulations (Germany)

Regulation on Installations Handling Substances Hazardous to Water (AwSV)

Water Hazard Class (WGK) 2, significantly hazardous to water

Technical Instructions on Air Quality Control (Germany)

Number	Substance Group	Class	Concentration	Mass Flow	Mass Concentration	Note
5.2.5	Organic substances	Class I	≥ 25% by weight	0,1 kg/h	20 mg/m ³	3)

Note

3) The mass flow of 0.50 kg/h or the mass concentration of 50 mg/m³, each stated as total carbon, must not be exceeded overall (excluding dusty organic substances).

Storage of Hazardous Substances in Movable Containers (TRGS 510) (Germany)

Storage Class 3 (flammable liquids)

National Inventories

Country	Inventory	Status
EU	REACH Reg.	Not all components are listed
US	TSCA	Not all components are listed

Legend

REACH Reg. REACH registered substances

TSCA Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture have not been carried out.

SECTION 16: Other Information

Abbreviations and Acronyms

Abbr.	Descriptions of the Abbreviations Used
2006/15/EG	Directive establishing a second list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Directives 91/322/EEC and 2000/39/EC
Acute Tox.	Acute Toxicity
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road (Accord européen relatif au transport international des marchandises dangereuses par route)
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (database of chemical compounds and their unique identifier, the CAS Registry Number)
CLP	Regulation (EC) No 1272/2008 on the classification, labelling, and packaging of substances and mixtures (Classification, Labelling and Packaging)
DGR	Dangerous Goods Regulations (transport regulations for dangerous goods, see IATA/DGR)
EG-No.	The EC Inventory (EINECS, ELINCS, and the NLP list) is the source for the seven-digit EC number as an identifier for substances in the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquid
GHS	Globally Harmonized System of Classification and Labelling of Chemicals, developed by the United Nations
GKV	Threshold limit values regulation
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
Index-No.	The identification code given in Annex VI Part 3 of Regulation (EC) No 1272/2008
IOELV	Indicative Occupational Exposure Limit Value
KZW	Short term exposure limit
LGK	Storage class according to TRGS 510, Germany
MARPOL	International Convention for the Prevention of Pollution from Ships
Mow	Ceiling value
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative, and Toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail (Règlement concernant le transport International ferroviaire des marchandises Dangereuses)
SMW	Time-weighted average
SVHC	Substance of Very High Concern
TRGS	Technical Rules for Hazardous Substances, Germany
VbF	Regulation on flammable liquids, Austria
vPvB	Very Persistent and very Bioaccumulative

Important Literature and Data Sources

Regulation (EC) No 1272/2008 on the classification, labelling, and packaging (CLP) of substances and mixtures. Regulation (EC) No 1907/2006 (REACH), amended by 2015/830/EU.

Carriage of Dangerous Goods by Road, Rail, or Inland Waterways (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for air transport (IATA).

Classification Methods

Physical and chemical properties: Classification is based on test results of the mixture.

Health hazards, environmental hazards: The method for classifying the mixture is based on its components (additivity formula).

List of Relevant Phrases (Codes and Text as Indicated in Sections 2 and 3)

Code	Text
H225	Highly flammable liquid and vapor.
H302	Harmful if swallowed.
H312	Harmful if contact with skin.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

Disclaimer

The provided information is based on our current knowledge. This Safety Data Sheet has been specifically prepared for this product and is intended solely for its use.

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