

## Patulin in acetonitrile

version number GHS 1.0  
replaces version of

Date of compilation: 29.04.2019

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

#### 1.1 Product identifier

Trade name **Patulin in acetonitrile**  
Article number 10000347, 10003659

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

Relevant identified uses Laboratory and analytical use  
Uses advised against Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

#### 1.3 Details of the supplier of the safety data sheet

Romer Labs® Division Holding GmbH  
Erber Campus 1  
3131 Getzersdorf  
Austria  
Telephone: +43 2782 803 0  
e-mail: office-europe@romerlabs.com  
Website: www.romerlabs.com

##### Manufacturer

| Country | Name                             | Street       | Postal code/city | Telephone         | e-Mail                      |
|---------|----------------------------------|--------------|------------------|-------------------|-----------------------------|
| Austria | Romer Labs Division Holding GmbH | Technopark 5 | 3430 Tulln       | +43 2272 615 33 0 | office-europe@romerlabs.com |

#### 1.4 Emergency telephone number

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

| Poison centre |                                 |                       |
|---------------|---------------------------------|-----------------------|
| Country       | Name                            | Telephone             |
| Austria       | Vergiftungsinformationszentrale | +43 1 406 43 43 (24h) |

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification acc. to GHS

| Section | Hazard class            | Category | Hazard class and category | Hazard statement |
|---------|-------------------------|----------|---------------------------|------------------|
| 2.6     | flammable liquid        | 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 (inhal.) | 4        | Acute Tox. 4              | H332             |

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| Section | Hazard class                      | Category | Hazard class and category | Hazard statement |
|---------|-----------------------------------|----------|---------------------------|------------------|
| 3.3     | serious eye damage/eye irritation | 2        | Eye Irrit. 2              | H319             |

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources.

### 2.2 Label elements

Labelling

- Signal word danger

- Pictograms

GHS02, GHS07



- Hazard statements

H225 Highly flammable liquid and vapour.  
H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.  
H319 Causes serious eye irritation.

- Precautionary statements

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/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P312 Call a POISON CENTRE/doctor if you feel unwell.  
P370+P378 In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.  
P403+P235 Store in a well-ventilated place. Keep cool.  
P501 Dispose of contents/container to industrial combustion plant.

- Hazardous ingredients for labelling acetonitrile

### 2.3 Other hazards

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Not relevant (mixture)

### 3.2 Mixtures

Description of the mixture

| Name of substance | Identifier        | Wt%  | Classification acc. to GHS                                                                                      | Pictograms                                                                            |
|-------------------|-------------------|------|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| acetonitrile      | CAS No<br>75-05-8 | ≥ 90 | Flam. Liq. 2 / H225<br>Acute Tox. 4 / H302<br>Acute Tox. 4 / H312<br>Acute Tox. 4 / H332<br>Eye Irrit. 2 / H319 |  |

For full text of abbreviations: see SECTION 16.

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### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

##### General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

##### Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

##### Following skin contact

Wash with plenty of soap and water.

##### Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

##### Following ingestion

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

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

Symptoms and effects are not known to date.

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

none

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO<sub>2</sub>)

##### Unsuitable extinguishing media

Water jet

#### 5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

##### Hazardous combustion products

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

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### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

#### 6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains

Advices on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate 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 considerations: see section 13.

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

- Specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may form explosive mixtures with air.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

#### 7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

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### - Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

### - Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted. Use local and general ventilation. Ground/bond container and receiving equipment.

### - Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

## 7.3 Specific end use(s)

See section 16 for a general overview.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

| Occupational exposure limit values (Workplace Exposure Limits) |               |         |            |           |                          |            |                           |                 |                                |          |            |
|----------------------------------------------------------------|---------------|---------|------------|-----------|--------------------------|------------|---------------------------|-----------------|--------------------------------|----------|------------|
| Country                                                        | Name of agent | CAS No  | Identifier | TWA [ppm] | TWA [mg/m <sup>3</sup> ] | STEL [ppm] | STEL [mg/m <sup>3</sup> ] | Ceiling-C [ppm] | Ceiling-C [mg/m <sup>3</sup> ] | Notation | Source     |
| EU                                                             | acetonitrile  | 75-05-8 | IOELV      | 40        | 70                       |            |                           |                 |                                |          | 2006/15/EC |

#### Notation

Ceiling-C

STEL

TWA

ceiling value is a limit value above which exposure should not occur  
short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)  
time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours  
time-weighted average (unless otherwise specified)

### 8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)



Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Chemical protection gloves are suitable, which are tested according to EN 374. Wear protective gloves. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Wash hands thoroughly after handling.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

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### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

##### Appearance

|                |                |
|----------------|----------------|
| Physical state | liquid         |
| Colour         | colourless     |
| Odour          | characteristic |

##### Other safety parameters

|                                         |                       |
|-----------------------------------------|-----------------------|
| pH (value)                              | not determined        |
| Melting point/freezing point            | -46 °C                |
| Initial boiling point and boiling range | 81 °C                 |
| Flash point                             | 5 °C                  |
| Evaporation rate                        | not determined        |
| Flammability (solid, gas)               | not relevant, (fluid) |

##### Explosive limits

|                               |                                               |
|-------------------------------|-----------------------------------------------|
| - Lower explosion limit (LEL) | 4.4 vol%                                      |
| - Upper explosion limit (UEL) | 16 vol%                                       |
| Vapour pressure               | 97 hPa at 20 °C                               |
| Density                       | not determined                                |
| Vapour density                | this information is not available             |
| Relative density              | information on this property is not available |

##### Solubility(ies)

|                    |                            |
|--------------------|----------------------------|
| - Water solubility | miscible in any proportion |
|--------------------|----------------------------|

##### Partition coefficient

|                             |                                   |
|-----------------------------|-----------------------------------|
| - n-octanol/water (log KOW) | this information is not available |
|-----------------------------|-----------------------------------|

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|                              |                                    |
|------------------------------|------------------------------------|
| Auto-ignition temperature    | 525 °C                             |
| Viscosity                    | not determined                     |
| Explosive properties         | none                               |
| Oxidising properties         | none                               |
| <b>9.2 Other information</b> | there is no additional information |

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition

#### 10.2 Chemical stability

See below "Conditions to avoid".

#### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

#### 10.4 Conditions to avoid

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

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

#### 10.5 Incompatible materials

Oxidisers

#### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

##### Classification acc. to GHS

Acute toxicity

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

- Acute toxicity estimate (ATE)

|                    |             |
|--------------------|-------------|
| Oral               | 500.1 mg/kg |
| Dermal             | 1,250 mg/kg |
| Inhalation: vapour | 11 mg/l/4h  |

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| Acute toxicity estimate (ATE) of components of the mixture |         |                    |             |
|------------------------------------------------------------|---------|--------------------|-------------|
| Name of substance                                          | CAS No  | Exposure route     | ATE         |
| acetonitrile                                               | 75-05-8 | oral               | 500 mg/kg   |
| acetonitrile                                               | 75-05-8 | dermal             | 1,250 mg/kg |
| acetonitrile                                               | 75-05-8 | inhalation: vapour | 11 mg/l/4h  |

### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

### Serious eye damage/eye irritation

Causes serious eye irritation.

### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

### Carcinogenicity

Shall not be classified as carcinogenic.

### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## SECTION 12: Ecological information

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

### 12.2 Persistence and degradability

Data are not available.

### 12.3 Bioaccumulative potential

Data are not available.

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

Data are not available.



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### 12.6 Other adverse effects

Endocrine disrupting potential  
None of the ingredients are listed.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Waste treatment-relevant information  
Solvent reclamation/regeneration.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used. Completely empty packages can be recycled. Handle contaminated packages in the same way as the substance itself.

### Relevant provisions relating to waste (Basel Convention)

Properties of waste which render it hazardous  
H3 Flammable liquids

### Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

## SECTION 14: Transport information

- |                                                                                |                                                                       |
|--------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| <b>14.1 UN number</b>                                                          | 1648                                                                  |
| <b>14.2 UN proper shipping name</b>                                            | ACETONITRILE                                                          |
| <b>14.3 Transport hazard class(es)</b>                                         |                                                                       |
| Class                                                                          | 3 (flammable liquids)                                                 |
| <b>14.4 Packing group</b>                                                      | II (substance presenting medium danger)                               |
| <b>14.5 Environmental hazards</b>                                              | non-environmentally hazardous acc. to the dangerous goods regulations |
| <b>14.6 Special precautions for user</b>                                       |                                                                       |
| There is no additional information.                                            |                                                                       |
| <b>14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code</b> |                                                                       |
| The cargo is not intended to be carried in bulk.                               |                                                                       |

### Information for each of the UN Model Regulations

#### Transport information - National regulations - Additional information (UN RTDG)

|                      |              |
|----------------------|--------------|
| UN number            | 1648         |
| Proper shipping name | ACETONITRILE |
| Class                | 3            |
| Packing group        | II           |
| Danger label(s)      | 3            |

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|                                                           |               |
|-----------------------------------------------------------|---------------|
| Special provisions (SP)                                   | - (UN RTDG)   |
| Excepted quantities (EQ)                                  | E2 (UN RTDG)  |
| Limited quantities (LQ)                                   | 1 l (UN RTDG) |
| <b>International Maritime Dangerous Goods Code (IMDG)</b> |               |
| UN number                                                 | 1648          |
| Proper shipping name                                      | ACETONITRILE  |
| Class                                                     | 3             |
| Marine pollutant                                          | -             |
| Packing group                                             | II            |
| Danger label(s)                                           | 3             |



|                                                                  |              |
|------------------------------------------------------------------|--------------|
| Excepted quantities (EQ)                                         | E2           |
| Limited quantities (LQ)                                          | 1 L          |
| EmS                                                              | F-E, S-D     |
| Stowage category                                                 | B            |
| <b>International Civil Aviation Organization (ICAO-IATA/DGR)</b> |              |
| UN number                                                        | 1648         |
| Proper shipping name                                             | Acetonitrile |
| Class                                                            | 3            |
| Packing group                                                    | II           |
| Danger label(s)                                                  | 3            |



|                          |     |
|--------------------------|-----|
| Excepted quantities (EQ) | E2  |
| Limited quantities (LQ)  | 1 L |

### SECTION 15: Regulatory information

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

There is no additional information.

##### National inventories

| Country | Inventory  | Status                         |
|---------|------------|--------------------------------|
| EU      | REACH Reg. | not all ingredients are listed |
| US      | TSCA       | not all ingredients are listed |

##### Legend

REACH Reg. REACH registered substances  
TSCA Toxic Substance Control Act

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### 15.2 Chemical Safety Assessment

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

## SECTION 16: Other information

### Abbreviations and acronyms

| Abbr.      | Descriptions of used abbreviations                                                                                                                                                                 |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2006/15/EC | Commission 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                                                                                                                                                                                     |
| ATE        | Acute Toxicity Estimate                                                                                                                                                                            |
| CAS        | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)                                                                                             |
| Ceiling-C  | Ceiling value                                                                                                                                                                                      |
| DGR        | Dangerous Goods Regulations (see IATA/DGR)                                                                                                                                                         |
| EmS        | Emergency Schedule                                                                                                                                                                                 |
| Eye Dam.   | Seriously damaging to the eye                                                                                                                                                                      |
| Eye Irrit. | Irritant to the eye                                                                                                                                                                                |
| Flam. Liq. | Flammable liquid                                                                                                                                                                                   |
| GHS        | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations                                                                                          |
| 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                                                                                                                                                        |
| IOELV      | Indicative occupational exposure limit value                                                                                                                                                       |
| MARPOL     | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")                                                                                                  |
| PBT        | Persistent, Bioaccumulative and Toxic                                                                                                                                                              |
| ppm        | Parts per million                                                                                                                                                                                  |
| REACH      | Registration, Evaluation, Authorisation and Restriction of Chemicals                                                                                                                               |
| STEL       | Short-term exposure limit                                                                                                                                                                          |
| TWA        | Time-weighted average                                                                                                                                                                              |
| vPvB       | Very Persistent and very Bioaccumulative                                                                                                                                                           |

### Key literature references and sources for data

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Classification procedure

Physical and chemical properties: The classification is based on tested mixture.

Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

# Safety Data Sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)

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### List of relevant phrases (code and full text as stated in chapter 2 and 3)

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

### Disclaimer

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