

## Patulin

version number GHS 2.0  
replaces version of 29.04.2019 (GHS 1)

Revision: 12.03.2024

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

#### 1.1 Product identifier

Identification of the substance **Patulin**  
CAS number 149-29-1  
Article number 10000315

#### 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 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.RomerLabsEU@dsm-firmenich.com  
Website: www.romerlabs.com

Additional information

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.RomerLabsEU@dsm-firmenich.com

#### 1.4 Emergency telephone number

Emergency information service +43 2782 803 0  
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
3.10	acute toxicity (oral)	2	Acute Tox. 2	H300

For full text of abbreviations: see SECTION 16.

#### 2.2 Label elements

Labelling

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- Signal word danger

- Pictograms

GHS06



- Hazard statements

H300 Fatal if swallowed.

- Precautionary statements

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P321 Specific treatment (see on this label).

P330 Rinse mouth.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

### 2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Name of substance Patulin

Identifiers

CAS No 149-29-1

Specific Conc. Limits	M-Factors	ATE	Exposure route
-	-	27.79 mg/kg	oral

Molecular formula C7 H6 O4

Molar mass 154.1 g/mol

## 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

Brush off loose particles from skin. Rinse skin with water/shower.

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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, Foam, ABC-powder

Unsuitable extinguishing media

Water jet

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

Deposited combustible dust has considerable explosion potential.

Hazardous combustion products

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.

## 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

Advice on how to contain a spill

Covering of drains, Take up mechanically

Advice on how to clean up a spill

Take up mechanically.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

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## 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. Take precautionary measures against static discharge. Use only in well-ventilated areas. Ground/bond container and receiving equipment.

- Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room.

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

Removal of dust deposits.

- Ventilation requirements

Use local and general ventilation.

- 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)  
this information is not available

### 8.2 Exposure controls

Appropriate engineering controls

Use local and general ventilation.

Individual protection measures (personal protective equipment)



Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear protective gloves.

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**- Other protection measures**

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

**Respiratory protection**

Particulate filter device (EN 143).

**Environmental exposure controls**

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

### SECTION 9: Physical and chemical properties

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

Physical state	solid
Colour	white
Odour	characteristic
Melting point/freezing point	111 °C
Boiling point or initial boiling point and boiling range	not determined
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	not determined
Flash point	not applicable
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	not applicable
Kinematic viscosity	not relevant
Solubility(ies)	not determined

**Partition coefficient**

Partition coefficient n-octanol/water (log value)	this information is not available
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Vapour pressure	not determined
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**Density and/or relative density**

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Density	not determined
Relative vapour density	information on this property is not available

Particle characteristics	no data available
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### 9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics	there is no additional information

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

### 10.2 Chemical stability

See below "Conditions to avoid".

### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

### 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

#### Classification acc. to GHS

Acute toxicity

Fatal if swallowed.

- Acute toxicity estimate (ATE)

Oral 27.79 mg/kg

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

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### 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.

## 11.2 Information on other hazards

There is no additional information.

## 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

According to the results of its assessment, this substance is not a PBT or a vPvB.

### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0,1\%$ .

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

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 emptied 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

H6.1      Poisonous (Acute)

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### 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

### 14.1 UN number or ID number

UN RTDG	UN 2811
IMDG-Code	UN 2811
ICAO-TI	UN 2811

### 14.2 UN proper shipping name

UN RTDG	TOXIC SOLID, ORGANIC, N.O.S.
IMDG-Code	TOXIC SOLID, ORGANIC, N.O.S.
ICAO-TI	Toxic solid, organic, n.o.s.
Technical name	Patulin

### 14.3 Transport hazard class(es)

UN RTDG	6.1
IMDG-Code	6.1
ICAO-TI	6.1

### 14.4 Packing group

UN RTDG	II
IMDG-Code	II
ICAO-TI	II

### 14.5 Environmental hazards

non-environmentally hazardous acc. to the dangerous goods regulations

### 14.6 Special precautions for user

There is no additional information.

### 14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

### Information for each of the UN Model Regulations

#### International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant	-
Danger label(s)	6.1



Special provisions (SP)	274
Excepted quantities (EQ)	E4
Limited quantities (LQ)	500 g
EmS	F-A, S-A
Stowage category	B

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### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Danger label(s) 6.1



Special provisions (SP) A3, A5

Excepted quantities (EQ) E4

Limited quantities (LQ) 1 kg

### 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	ECSI	substance is listed
NZ	NZIoC	substance is listed
TW	TCSI	substance is listed
VN	NCI	substance is listed

#### Legend

ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
NCI	National Chemical Inventory
NZIoC	New Zealand Inventory of Chemicals
TCSI	Taiwan Chemical Substance Inventory

#### 15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance.

### SECTION 16: Other information

#### Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
1.1	Alternative name(s): 4,6-dihydro-4-hydroxy-2H-furo[3,2-c]pyran-2-one		yes
1.1	Article number: 10000315		yes
1.1		Article number: 10000315	yes
1.2	Uses advised against: Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).	Uses advised against: Do not use for private purposes (household).	yes

# Safety Data Sheet

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

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-rel- evant
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	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.RomerLabsEU@dsm-firmenich.com Website: www.romerlabs.com	yes
1.3	Manufacturer		yes
1.3		Manufacturer: change in the listing (table)	yes
1.3		Additional information	yes
1.3		Manufacturer: change in the listing (table)	yes
1.4	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	Emergency information service: +43 2782 803 0 Mon - Thu 09:00 - 16:00, Fri 09:00 - 12:00, GMT+1	yes
1.4		Poison centre: change in the listing (table)	yes
1.4		Poison centre: change in the listing (table)	yes
2.2		- Precautionary statements: change in the listing (table)	yes
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$ .	yes
3.1		CAS No: change in the listing (table)	yes
5.2	Hazardous combustion products: Nitrogen oxides (NOx), Carbon monoxide (CO), Car- bon dioxide (CO2)	Hazardous combustion products: Carbon monoxide (CO), Carbon dioxide (CO2)	yes
7.1	Specific notes/details: Dust deposits may accumulate on all deposition surfaces in a technical room. The product in the de- livered form is not dust explosion capable; the en- richment of fine dust however leads to the danger of dust explosion.	Specific notes/details: Dust deposits may accumulate on all deposition surfaces in a technical room.	yes
8.1	Control parameters: This information is not available.	Control parameters: Occupational exposure limit values (Workplace Ex- posure Limits) this information is not available	yes
8.2	Appropriate engineering controls: General ventilation.	Appropriate engineering controls: Use local and general ventilation.	yes
8.2	Hand protection: Chemical protection gloves are suitable, which are tested according to EN 374. Wear protective gloves. Check leak-tightness/impermeability prior to use.	Hand protection: Wear protective gloves.	yes
9.1	Appearance		yes
9.1	Other safety parameters		yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-rel- evant
9.1		Lower and upper explosion limit: not determined	yes
9.1	Evaporation rate: not determined		yes
9.1	Explosion limits of dust clouds: not determined		yes
9.1		Decomposition temperature: not relevant	yes
9.1		Kinematic viscosity: not relevant	yes
9.1		Density and/or relative density	yes
9.1	Vapour density: this information is not available		yes
9.1	Viscosity: not relevant (solid matter)		yes
9.1	Explosive properties: none		yes
9.1	Oxidising properties: none		yes
9.1		Particle characteristics: no data available	yes
9.2	other information: there is no additional information	Other information	yes
9.2		Information with regard to physical hazard classes: hazard classes acc. to GHS (physical hazards): not relevant	yes
9.2		Other safety characteristics: there is no additional information	yes
10.4	Hints to prevent fire or explosion: The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.		yes
11.2		Information on other hazards: There is no additional information.	yes
12.5	Results of PBT and vPvB assessment: Data are not available.	Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.	yes
12.6	Endocrine disrupting potential: Not listed.	Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$ .	yes
12.7	Other adverse effects	Other adverse effects: Data are not available.	yes
14.1	UN number: 2811	UN number or ID number	yes
14.1		UN RTDG: UN 2811	yes
14.1		IMDG-Code: UN 2811	yes

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14.1		ICAO-TI: UN 2811	yes
14.2	UN proper shipping name: TOXIC SOLID, ORGANIC, N.O.S.	UN proper shipping name	yes
14.2		UN RTDG: TOXIC SOLID, ORGANIC, N.O.S.	yes
14.2		IMDG-Code: TOXIC SOLID, ORGANIC, N.O.S.	yes
14.2		ICAO-TI: Toxic solid, organic, n.o.s.	yes
14.3	Class: 6.1 (toxic substances)		yes
14.3		UN RTDG: 6.1	yes
14.3		IMDG-Code: 6.1	yes
14.3		ICAO-TI: 6.1	yes
14.4	Packing group: II (substance presenting medium danger)	Packing group	yes
14.4		UN RTDG: II	yes
14.4		IMDG-Code: II	yes
14.4		ICAO-TI: II	yes
14.7	Transport information - National regulations - Addi- tional information (UN RTDG)		yes
14.7	UN number: 2811		yes
14.7	Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S.		yes
14.7	Class: 6.1		yes
14.7	Packing group: II		yes
14.7	Danger label(s): 6.1		yes
14.7		Danger label(s): change in the listing (table)	yes
14.7	Special provisions (SP): 274 (UN RTDG)		yes
14.7	Excepted quantities (EQ): E4 (UN RTDG)		yes
14.7	Limited quantities (LQ): 500 g (UN RTDG)		yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-rel- evant
14.7	UN number: 2811		yes
14.7	Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S.		yes
14.7	Class: 6.1		yes
14.7	Packing group: II		yes
14.7	UN number: 2811		yes
14.7	Proper shipping name: Toxic solid, organic, n.o.s.		yes
14.7	Class: 6.1		yes
14.7	Packing group: II		yes
15.1		National inventories	yes
15.1		National inventories: change in the listing (table)	yes
16		Abbreviations and acronyms: change in the listing (table)	yes
16	Disclaimer: This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product. copyright: Romer Labs	Disclaimer: This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product. © 2024 Romer Labs	yes

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
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
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code

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Abbr.	Descriptions of used abbreviations
IMDG-Code	International Maritime Dangerous Goods Code
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
UN RTDG	UN Recommendations on the Transport of Dangerous Good
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).

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

Code	Text
H300	Fatal if swallowed.

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

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