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

### **Digitoxin ROTICHROM® ~CHRDC**

article number: **7359**Version: **3.0 en**date of compilation: 2019-08-05
Revision: 2022-08-18

Replaces version of: 2019-08-06

Version: (2)

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

### 1.1 Product identifier

Article number 7359

EC number 200-760-5 CAS number 71-63-6

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

Relevant identified uses: Laboratory chemical

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

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

**Telephone:**+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de **Website:** www.carlroth.de

Competent person responsible for the safety data :Department Health, Safety and Environment

sheet:

e-mail (competent person): sicherheit@carlroth.de

### 1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

## **SECTION 2: Hazards identification**

### 2.1 Classification of the substance or mixture

### Classification acc. to GHS

Section	Section Hazard class		Hazard class and category	Hazard statement
3.10	Acute toxicity (oral)	3	Acute Tox. 3	H301
3.1I	3.1I Acute toxicity (inhal.)		Acute Tox. 3	H331
3.9 Specific target organ toxicity - repeated exposure		2	STOT RE 2	H373

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For full text of abbreviations: see SECTION 16



Delayed or immediate effects can be expected after short or long-term exposure.

### 2.2 Label elements

### Labelling

Signal word Danger

### **Pictograms**

GHS06, GHS08





### **Hazard statements**

H301+H331 Toxic if swallowed or if inhaled

H373 May cause damage to organs through prolonged or repeated exposure

### **Precautionary statements**

### **Precautionary statements - prevention**

P260 Do not breathe dusts or mists

P280 Wear protective gloves/eye protection

### **Precautionary statements - response**

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

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing

### 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.

## **SECTION 3: Composition/information on ingredients**

### 3.1 Substances

Name of substance Digitoxin Molecular formula  $C_{41}H_{64}O_{13}$  Molar mass  $765 \, ^{9}\!/_{mol}$  CAS No 71-63-6 EC No 200-760-5

### Substance, Specific Conc. Limits, M-factors, ATE

Specific Conc. Limits	M-Factors	ATE	Exposure route
-	-	100 <sup>mg</sup> / <sub>kg</sub> 0,5 <sup>mg</sup> / <sub>l</sub> /4h	oral inhalation: dust/ mist

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## **SECTION 4: First aid measures**

### 4.1 Description of first aid measures



### **General notes**

Self-protection of the first aider.

### Following inhalation

Call a physician immediately. If breathing is irregular or stopped, administer artificial respiration.

### Following skin contact

Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.

## Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

## **Following ingestion**

Rinse mouth immediately and drink plenty of water. Call a physician immediately.

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

Cardiac arrhythmias, Nausea, Vomiting, Diarrhoea, Headache, Large doses may result in coma and death

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

none

## **SECTION 5: Firefighting measures**

## 5.1 Extinguishing media



### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings water, foam, dry extinguishing powder, ABC-powder

## Unsuitable extinguishing media

water iet

## 5.2 Special hazards arising from the substance or mixture

Combustible.

### **Hazardous combustion products**

In case of fire may be liberated: 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. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

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### **SECTION 6: Accidental release measures**

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



### For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe dust.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

### 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. Control of dust.

### Other information relating to spills and releases

Place in appropriate containers for disposal.

### 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

Use extractor hood (laboratory). Avoid dust formation. Clear contaminated areas thoroughly.

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

Removal of dust deposits.

### Advice on general occupational hygiene

When using do not eat or drink. Thorough skin-cleansing after handling the product.

## 7.2 Conditions for safe storage, including any incompatibilities

Store in a dry place.

### **Incompatible substances or mixtures**

Observe hints for combined storage.

### Consideration of other advice:

Store locked up.

### **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.

## Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

### 7.3 Specific end use(s)

No information available.

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## SECTION 8: Exposure controls/personal protection

#### 8.1 **Control parameters**

### **National limit values**

### Occupational exposure limit values (Workplace Exposure Limits)

Coun try	Name of agent	CAS No	Identifi- er	TWA [mg/ m³]	STEL [mg/ m³]	Ceil- ing-C [mg/ m³]	Nota- tion	Source
GB	dust		WEL	10			i	EH40/2005
GB	dust		WEL	4			r	EH40/2005

**Notation** 

Ceiling value is a limit value above which exposure should not occur Inhalable fraction Ceiling-C

Respirable fraction

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) STFI

TWA 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**

### Individual protection measures (personal protective equipment)

### **Eye/face protection**





Use safety goggle with side protection.

### Skin protection





### hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. 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. The times are approximate values from measurements at 22° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

### type of material

NBR (Nitrile rubber)

material thickness

>0,11 mm

### breakthrough times of the glove material

>480 minutes (permeation: level 6)

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Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

### **Respiratory protection**





Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P3 (filters at least 99,95 % of airborne particles, colour code: White).

### **Environmental exposure controls**

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

Form powder Colour white

Odour odourless

256 - 257 °C Melting point/freezing point not determined

Boiling point or initial boiling point and boiling

range

this material is combustible, but will not ignite Flammability

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)

0,01 <sup>g</sup>/<sub>l</sub> at 22 °C (practically insoluble) Water solubility

partially soluble Solubility in alcohol

Solubility in ethyl acetate practically insoluble

Partition coefficient

Partition coefficient n-octanol/water (log value): 1,83 (TOXNET)

not determined Vapour pressure

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ROTH

Density and/or relative density

Density not determined

Relative vapour density information on this property is not available

Particle characteristics No data available.

Other safety parameters

Oxidising properties none

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

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

## 10.3 Possibility of hazardous reactions

Violent reaction with: strong oxidiser, Strong acid

### 10.4 Conditions to avoid

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

### 10.5 Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## **SECTION 11: Toxicological information**

### 11.1 Information on toxicological effects

Classification acc. to GHS

### **Acute toxicity**

Toxic if swallowed. Toxic if inhaled.

### 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.

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### 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

May cause damage to organs through prolonged or repeated exposure.

### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

### Symptoms related to the physical, chemical and toxicological characteristics

### If swallowed

Data are not available.

### If in eyes

Data are not available.

### If inhaled

Data are not available.

### • If on skin

Data are not available.

### Other information

This information is based upon the present state of our knowledge. Substance not yet fully tested. Cardiac arrhythmias, Nausea, Headache

### 11.2 Endocrine disrupting properties

Not listed.

### 11.3 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.

### **Biodegradation**

Data are not available.

## 12.2 Process of degradability

Theoretical Oxygen Demand: 2,112 <sup>mg</sup>/<sub>mg</sub> Theoretical Carbon Dioxide: 2,359 <sup>mg</sup>/<sub>mg</sub>

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## **Process of degradability**

Process	Degradation rate	Time
biotic/abiotic	76 %	28 d

### 12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW) 1,83	83 (TOXNET)
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## 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

Data are not available.

### 12.6 Endocrine disrupting properties

Not listed.

### 12.7 Other adverse effects

Data are not available.

## **SECTION 13: Disposal considerations**

### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

### Sewage disposal-relevant information

Do not empty into drains.

### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Waste catalogue ordinance (Germany).

## 13.3 Remarks

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

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## **SECTION 14: Transport information**

### 14.1 UN number or ID number

ADRRID UN 1544
IMDG-Code UN 1544
ICAO-TI UN 1544

### 14.2 UN proper shipping name

ADRRID ALKALOIDS, SOLID, N.O.S. IMDG-Code ALKALOIDS, SOLID, N.O.S. ICAO-TI Alkaloid salts, solid, n.o.s.

Technical name Digitoxin

### 14.3 Transport hazard class(es)

ADRRID 6.1 IMDG-Code 6.1 ICAO-TI 6.1

### 14.4 Packing group

ADRRID III
IMDG-Code III
ICAO-TI III

**14.5** Environmental hazards non-environmentally hazardous acc. to the dan-

gerous goods regulations

## 14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

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

The cargo is not intended to be carried in bulk.

### 14.8 Information for each of the UN Model Regulations

# Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information

Proper shipping name ALKALOIDS, SOLID, N.O.S.

Particulars in the transport document UN1544, ALKALOIDS, SOLID, N.O.S., (Digitoxin),

6.1, III, (E)

Classification code T2
Danger label(s) 6.1



Special provisions (SP) 43, 274, 802(ADN)

Excepted quantities (EQ) E1
Limited quantities (LQ) 5 kg

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Transport category (TC) 2
Tunnel restriction code (TRC) E

Hazard identification No 60

Emergency Action Code 2X

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)Additional

information

Classification code T2

Danger label(s) 6.1

Special provisions (SP) 43, 274, 802(ADN)

Excepted quantities (EQ) E1
Limited quantities (LQ) 5 kg
Transport category (TC) 2
Hazard identification No 60

International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name ALKALOIDS, SOLID, N.O.S.

Particulars in the shipper's declaration UN1544, ALKALOIDS, SOLID, N.O.S., (Digitoxin),

6.1, III

Marine pollutant -

Danger label(s) 6.1

Special provisions (SP) 43, 223, 274

Excepted quantities (EQ) E1
Limited quantities (LQ) 5 kg
EmS F-A, S-A

Stowage category A

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

Proper shipping name Alkaloid salts, solid, n.o.s.

Particulars in the shipper's declaration UN1544, Alkaloid salts, solid, n.o.s., (Digitoxin),

6.1, III

Danger label(s) 6.1

Special provisions (SP) A3, A5, A6

Excepted quantities (EQ) E1
Limited quantities (LQ) 10 kg

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## **SECTION 15: Regulatory information**

Safety, health and environmental regulations/legislation specific for the substance or mixture Relevant provisions of the European Union (EU)

#### **Seveso Directive**

2012/18/EU (Seveso III)						
No	Dangerous substance/hazard categories Qualifying quantity (tonnes) for the application of lower and upper-tier requirements		Notes			
H2	acute toxic (cat. 2 + cat. 3, inhal.)	50	200	41)		

### Notation

### **Deco-Paint Directive**

VOC content 0 %	
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### **Industrial Emissions Directive (IED)**

VOC content	0 %
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Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

Water Framework Directive (WFD)

not listed

Regulation on the marketing and use of explosives precursors

**Regulation on drug precursors** 

not listed

Regulation on substances that deplete the ozone layer (ODS)

not listed

Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

Regulation on persistent organic pollutants (POP)

not listed

National regulations(GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

not listed

Restrictions according to GB REACH, Annex 17

not listed

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<sup>-</sup> Category 2, all exposure routes - category 3, inhalation exposure route

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#### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

### **National inventories**

Country	Inventory	Status
CA	NDSL	substance is listed
EU	ECSI	substance is listed
JP	CSCL-ENCS	substance is listed
MX	INSQ	substance is listed
NZ	NZIoC	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed

Legend

CSCL-ENCS List of Existing and New Chemical Substances (CSCL-ENCS) ECSI EC Substance Inventory (EINECS, ELINCS, NLP) INSO National Inventory of Chemical Substances NDSL Non-domestic Substances List (NDSL) New Zealand Inventory of Chemicals Taiwan Chemical Substance Inventory Toxic Substance Control Act NZIoC TCSI

### 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)**

Alignment to regulation:

Restructuring: section 9, section 14

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
2.1		Classification acc. to GHS: change in the listing (table)	yes
2.1		The most important adverse physicochemical, human health and environmental effects: Delayed or immediate effects can be expected after short or long-term exposure.	yes
2.2		Precautionary statements - prevention: change in the listing (table)	yes
2.2		Precautionary statements - response: change in the listing (table)	yes
2.2	Precautionary statements - storage		yes
2.2		Precautionary statements - storage: change in the listing (table)	yes
2.2	Labelling of packages where the contents do not exceed 125 ml: Signal word: Danger		yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.3	Other hazards: There is no additional information.	Other hazards	yes
2.3		Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.	yes

## **Abbreviations and acronyms**

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de naviga- tion intérieures (European Agreement concerning the International Carriage of Dangerous Goods by In- land Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
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)
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-li- cence/)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
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
IMDG-Code	International Maritime Dangerous Goods Code
NLP	No-Longer Polymer

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Abbr.	Descriptions of used abbreviations
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula- tions concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

### Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). 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
H301	Toxic if swallowed.
H331	Toxic if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.

### **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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