according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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Strychnine ROTICHROM[®] CHR ≥95 %, for biochemistry

article number: **4843** Version: **3.0 en** Replaces version of: 25.02.2022 Version: (2)

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

1.1 Product identifier

1.2

Identification of the substance	Strychnine ROTICHROM® CHR ≥95 %, for bio- chemistry	
Article number	4843	
Registration number (REACH)	It is not required to list the identified uses be- cause the substance is not subject to registration according to REACH (< 1 t/a).	
Index number in CLP Annex VI	614-003-00-5	
EC number	200-319-7	
CAS number	57-24-9	
Relevant identified uses of the substance or mixture and uses advised against		

Relevant identified uses:

Uses advised against:

Laboratory chemical Laboratory and analytical use

Do not use for squirting or spraying. Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household). Food, drink and animal feedingstuffs.

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
3.10	Acute toxicity (oral)		Acute Tox. 1	H300
3.1D	Acute toxicity (dermal)		Acute Tox. 1	H310
4.1A	Hazardous to the aquatic environment - acute hazard		Aquatic Acute 1	H400
4.1C	Hazardous to the aquatic environment - chronic hazard	1	Aquatic Chronic 1	H410

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word Danger

Pictograms

GHS06, GHS09



Hazard statements

H300+H310Fatal if swallowed or in contact with skinH410Very toxic to aquatic life with long lasting effects

Precautionary statements

Precautionary statements - prevention

P280 Wear protective gloves/protective clothing/eye protection/face protection

Precautionary statements - response

P302+P352	IF ON SKIN: Wash with plenty of soap and water
P310	Immediately call a POISON CENTER/doctor
P391	Collect spillage

Precautionary statements - storage

P405 Store locked up

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Symbol(s)



H300+H310

Fatal if swallowed or in contact with skin.

P280Wear protective gloves/protective clothing/eye protection/face protection.P302+P352IF ON SKIN: Wash with plenty of soap and water.P310Immediately call a POISON CENTER/doctor.P405Store locked up.

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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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 $\ge 0,1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	Strychnine
Molecular formula	$C_{21}H_{22}N_2O_2$
Molar mass	334,4 ^g / _{mol}
CAS No	57-24-9
EC No	200-319-7
Index No	614-003-00-5

Substance, Specific Conc. Limits, M-factors, ATE			
Specific Conc. Limits	M-Factors	ATE	Exposure route
-	-	2,35 ^{mg} / _{kg} 5 ^{mg} / _{kg}	oral dermal

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

After contact with skin, wash immediately with plenty of water.

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

Poisoning effect on central nervous system can cause convulsions, laboured breathing and loss of consciousness

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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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 jet

5.2 Special hazards arising from the substance or mixture

Combustible.

Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

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. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

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.

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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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

Handle and open container with care. Avoid dust formation. Clear contaminated areas thoroughly.

Measures to protect the environment

Avoid release to the environment.

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.

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection.

Skin protection



according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. 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. 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)

• other protection measures

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	crystalline
Colour	light yellow
Odour	odourless
Melting point/freezing point	286 – 288 °C
Boiling point or initial boiling point and boiling range	270 °C at 6,7 hPa
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

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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pH (value)	not applicable
Kinematic viscosity	not relevant
Solubility(ies)	
Water solubility	0,16 ^g / _l at 25 °C (poorly soluble)
Partition coefficient	
Partition coefficient n-octanol/water (log value):	1,93
Vapour pressure	not determined
Density and/or relative density	
Density	1,36 ^g / _{cm³} at 20 °C
Relative vapour density	Information on this property is not available.
Particle characteristics	No data available.
Other safety parameters	
Oxidising properties	none
Other information	
Information with regard to physical hazard	hazard classes acc. to GHS
classes:	(physical hazards): not relevant
Other safety characteristics:	There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

9.2

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

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.

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

Acute toxicity

Fatal if swallowed. Fatal in contact with skin.

Acute toxicity

Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	2,35 ^{mg} / _{kg}	rat		TOXNET
dermal	LD50	>2.000 ^{mg} / _{kg}	rabbit		

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.

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.

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.

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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Other information

Dyspnoea, Spasms, Agitation

- **11.2** Endocrine disrupting properties Does not contain an endocrine disruptor (ED) at a concentration of $\ge 0,1\%$.
- **11.3** Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)				
Endpoint	Value	Species	Source	Exposure time
LC50	0,76 ^{mg} / _l	bluegill (Lepomis mac- rochirus)		96 h

12.2 Persistence and degradability

Theoretical Oxygen Demand (without nitrification): 2,296 $^{mg}/_{mg}$ Theoretical Oxygen Demand (with nitrification): 2,5 $^{mg}/_{mg}$ Theoretical Carbon Dioxide: 2,764 $^{mg}/_{mg}$

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW)	1,93
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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

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

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.

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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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

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

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.

Properties of waste which render it hazardous

HP6 acute toxicity

HP 14 ecotoxic

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. Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1 UN number or ID number

1-7.1		
	ADR	UN 1692
	IMDG-Code	UN 1692
	ICAO-TI	UN 1692
14.2	UN proper shipping name	
	ADR	STRYCHNINE
	IMDG-Code	STRYCHNINE
	ICAO-TI	Strychnine
14.3	Transport hazard class(es)	
	ADR	6.1
	IMDG-Code	6.1
	ICAO-TI	6.1
14.4	Packing group	
	ADR	Ι
	IMDG-Code	Ι
	ICAO-TI	I
14.5	Environmental hazards	hazardous to the aquatic environment

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.

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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14.8 Information for each of the UN Model Regulations

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)Additional information

Proper shipping name	STRYCHNINE
Particulars in the transport document	UN1692, STRYCHNINE, 6.1, I, (C/E), environment- ally hazardous
Classification code	T2
Danger label(s)	6.1, "Fish and tree"
Environmental hazards	Yes (hazardous to the aquatic environment)
Special provisions (SP)	802(ADN)
Excepted quantities (EQ)	E5
Limited quantities (LQ)	0
Transport category (TC)	1
Tunnel restriction code (TRC)	C/E
Hazard identification No	66
International Maritime Dangerous Goods Code	(IMDG) - Additional information
Proper shipping name	STRYCHNINE
Particulars in the shipper's declaration	UN1692, STRYCHNINE, 6.1, I, MARINE POLLUT- ANT
Marine pollutant	yes (P) (hazardous to the aquatic environment)
Danger label(s)	6.1, "Fish and tree"
Special provisions (SP)	43
Excepted quantities (EQ)	E5
Limited quantities (LQ)	0
EmS	F-A, S-A
Stowage category	A
International Civil Aviation Organization (ICAO	-IATA/DGR) - Additional information
Proper shipping name	Strychnine
Particulars in the shipper's declaration	UN1692, Strychnine, 6.1, I
Environmental hazards	Yes (hazardous to the aquatic environment)
Danger label(s)	6.1

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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Special provisions (SP)	A5	
Excepted quantities (EQ)	E5	

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

not listed

List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list Not listed.

Seveso Directive

2012/18/EU (Seveso III)				
Νο	Dangerous substance/hazard categories	Qualifying quantity plication of lower quirer		Notes
H1	acute toxic (cat. 1)	5	20	40)

Notation

40) Category 1, all exposure routes

Deco-Paint Directive

VOC content	0 %
VOC content	0 ^g / _l

Industrial Emissions Directive (IED)

VOC content	0 %
VOC content	0 ^g /l

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

not listed

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

not listed

Regulation on drug precursors

not listed

Regulation on substances that deplete the ozone layer (ODS)

not listed

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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

chemicals subject to the international prior informed consent (PIC) procedure (the 'PIC procedure').

Name of substance	Name acc. to inventory	CAS No	Wt%	Category / subcat- egory	Use limita- tion
Strychnine	strychnine	57-24-9	100	p(1)	b

Legend

b p(1)

Use limitation: ban (for the sub-category or sub-categories concerned) according to Union legislation Sub-category: p(1) - pesticide in the group of plant protection products

Regulation on persistent organic pollutants (POP)

not listed

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	DSL	substance is listed
CN	IECSC	substance is listed
EU	ECSI	substance is listed
KR	KECI	substance is listed
MX	INSQ	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed (ACTIVE)
VN	NCI	substance is listed

Legend

DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals Inventory
NCI	National Chemical Inventory
NZIOC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

15.2 Chemical safety assessment

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

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU



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SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.	yes
15.1	VOC content: 0 % 0 ^g / _l	VOC content: 0 %	yes
15.1		VOC content: 0 ^g / _l	yes
15.1		Regulation concerning the export and import of hazardous chemicals (PIC): change in the listing (table)	yes
15.1		National inventories: change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concern- ing 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)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
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 identi- fier of substances commercially available within the EU (European Union)
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 Na- tions
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
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008

according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU

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Abbr.	Descriptions of used abbreviations
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
SVHC	Substance of Very High Concern
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). 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.
H310	Fatal in contact with skin.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Disclaimer

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