according to Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU

ROTH

Cucurbitacin I ROTICHROM® HPLC

article number: **9032** date of compilation: 2015-07-15 Version: **1.0 en**

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

1.1 Product identifier

Identification of the substance Cucurbitacin I

Article number 9032

Registration number (REACH)

This information is not available.

EC number 218-736-8
CAS number 2222-07-3

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

Relevant identified uses of the substance or mixture

and uses advised against

laboratory chemical

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

sheet

: Department Health, Safety and Environment

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

1.4 Emergency telephone number

Emergency information service Poison Centre Munich: +49/(0)89 19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Classification acc. to GHS Section **Hazard class** Hazard class and cat-Hazard stateegory ment 3.10 (Acute Tox. 1) H300 acute toxicity (oral) 3.1D (Acute Tox. 3) H311 acute toxicity (dermal)

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2.2 Label elements

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

Signal word Danger

Pictograms



Hazard statements

H300 Fatal if swallowed.

H311 Toxic in contact with skin.

Precautionary statements

Precautionary statements - prevention

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

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

Precautionary statements - response

P301+P310 IF SWALLOWED: immediately call a POISON CENTER or doctor/physician.

P302+P352 IF ON SKIN: wash with plenty of soap and water. P312 Call a POISON CENTER/doctor if you feel unwell.

Precautionary statements - storage

P405 Store locked up.

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Symbol(s)



H300 Fatal if swallowed. H311 Toxic in contact with skin.

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

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: immediately call a POISON CENTER or doctor/physician.

P302+P352 IF ON SKIN: wash with plenty of soap and water.

P405 Store locked up.

2.3 Other hazards

There is no additional information.

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SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance Cucurbitacin I

EC number 218-736-8

CAS number 2222-07-3

Molecular formula $C_{30}H_{42}O_7$

Molar mass 514,7 ⁹/_{mol}

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. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Medical treatment necessary.

Following skin contact

After contact with skin, wash immediately with plenty of water. Call a physician in any case.

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

Symptoms and effects are not known to date

4.3 Indication of any immediate medical attention and special treatment needed

none

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings water spray, foam, dry extinguishing powder, carbon dioxide (CO2)

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: carbon monoxide (CO), carbon dioxide (CO2)

5.3 Advice for firefighters

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

Provision of sufficient ventilation. Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Avoid contact with skin, eyes and clothes.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

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

Take up mechanically. Control of dust.

Other information relating to spills and releases

Place in appropriate containers for disposal.

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.

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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handle and open container with care. Use extractor hood (laboratory). Avoid dust formation.

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

Removal of dust deposits.

Advice on general occupational hygiene

Do not to eat, drink and smoke in work areas. Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a cool place. Store in a dry place.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice

Store locked up.

Ventilation requirements

Use local and general ventilation.

· Specific designs for storage rooms or vessels

Recommended storage temperature: 4 °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)

| Coun- try | Name of agent | CAS No | Notation | Identifier | TWA [mg/m³] | STEL [mg/m³] | Source |
|--------------|---------------|--------|----------|------------|----------------|-----------------|-----------|
| UK | dust | | i | WEL | 10 | | EH40/2005 |
| UK | dust | | r | WEL | 4 | | EH40/2005 |

Notation

Inhalable fraction Respirable fraction

STEL 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-**TWA**

8.2 **Exposure controls**

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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. 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.

· 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

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

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

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

Appearance

Physical state solid (powder)

Colour whitish

Odour odourless

Odour threshold No data available

Other physical and chemical parameters

pH (value) This information is not available.

Melting point/freezing point 148 - 150 °C

Initial boiling point and boiling range

This information is not available.

Flash point not applicable

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Evaporation rate no data available

Flammability (solid, gas)

Non-flammable

Explosive limits

lower explosion limit (LEL)
 this information is not available

upper explosion limit (UEL)
 this information is not available

Explosion limits of dust clouds these information are not available

Vapour pressure This information is not available.

Density This information is not available.

Vapour density This information is not available.

Relative density Information on this property is not available.

Solubility(ies) Trichloromethane (chloroform) - (Soluble)

Ethanol - (Slightly soluble)

Water solubility no data available

Partition coefficient

n-octanol/water (log KOW)

This information is not available.

Auto-ignition temperature Information on this property is not available.

Viscosity not relevant (solid matter)

Explosive properties none

Oxidising properties none

9.2 Other information

There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

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

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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

Acute toxicity

| Exposure route | Endpoint | Value | Species | Source |
|----------------|----------|---------------------------------|---------|--------|
| oral | LD50 | 5 ^{mg} / _{kg} | mouse | |

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Causes slight to moderate irritation.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Summary of evaluation of the CMR properties

Shall not be classified as germ cell mutagenic, carcinogenic nor 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

diarrhoea, vomiting, circulatory collapse, Spasms, Blood pressure drop

• If inhaled

data are not available

• If on skin

data are not available

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Other information

None.

SECTION 12: Ecological information

12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

12.2 Process of degradability

Theoretical Oxygen Demand: 2,3 $^{\rm mg}/_{\rm mg}$ Theoretical Carbon Dioxide: 2,565 $^{\rm mg}/_{\rm mg}$

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Hazardous to water.

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 regulation.

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.

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 2811

14.2 UN proper shipping name TOXIC SOLID, ORGANIC, N.O.S.

2,16a,20,25-tetrahydroxy-9β-methyl-10a-19-nor-Hazardous ingredients

lanosta-1,5,23(E)-triene-3,11,22-trione

14.3 Transport hazard class(es)

> Class 6.1 (toxic substances)

14.4 Packing group I (substance presenting high danger)

14.5 Environmental hazards **none** (non-environmentally hazardous acc. to the dangerous

goods regulations)

14.6 Special precautions for user

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

Transport in bulk according to Annex II of MARPOL and the IBC Code

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)

UN number 2811

TOXIC SOLID, ORGANIC, N.O.S. Proper shipping name

Particulars in the transport document UN2811, TOXIC SOLID, ORGANIC, N.O.S.

 $(2,16\alpha,20,25\text{-tetrahydroxy-9}\beta\text{-methyl-}10\alpha\text{-}19\text{-nor-lanosta-}1,5,23(E)\text{-triene-}3,11,22\text{-trione}), 6.1, I, (C/E)$

Class 6.1

Classification code T2

Packing group

6.1 Danger label(s)



Special provisions (SP) 274, 614, 802(ADN)

Excepted quantities (EQ) E5

Limited quantities (LQ)

Transport category (TC) 1

C/E Tunnel restriction code (TRC)

Hazard identification No 66

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International Maritime Dangerous Goods Code (IMDG)

UN number 2811

TOXIC SOLID, ORGANIC, N.O.S. Proper shipping name

Particulars in the shipper's declaration

UN2811, TOXIC SOLID, ORGANIC, N.O.S., (2,16 α ,20,25-tetrahydroxy-9 β -methyl-10 α -19-norlanosta-1,5,23(E)-triene-3,11,22-trione), 6.1, I

Class 6.1

Packing group

Danger label(s) 6.1



Special provisions (SP) 274

Excepted quantities (EQ) E5

Limited quantities (LQ)

EmS F-A, S-A

Stowage category В

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture 15.1 Relevant provisions of the European Union (EU)

- Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC) Not listed.
- Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS) Not listed.
- Regulation 850/2004/EC on persistent organic pollutants (POP) Not listed.
- Restrictions according to REACH, Annex XVII
- not listed
- List of substances subject to authorisation (REACH, Annex XIV) not listed

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Seveso Directive

| 96/82/EC (Seveso II) | | | | |
|----------------------|---------------------------------------|------------------------------|----|-------|
| No | Dangerous substance/hazard categories | Qualifying quantity (tonnes) | | Notes |
| 1 | very toxic | 5 | 20 | |

| 2012/18/EU (Seveso III) | | | | |
|-------------------------|---------------------------------------|---|---------------------|-------|
| No | Dangerous substance/hazard categories | Qualifying quantity (t plication of lower and men | upper-tier require- | Notes |
| H1 | acute toxic (cat. 1) | 5 | 20 | 40) |

Notation

40) Category 1, all exposure routes

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

not listed

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

not listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

not listed

National inventories

Substance is listed in the following national inventories:

- EINECS/ELINCS/NLP (Europe)

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|-----------|---|
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |
| ADR | Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road) |
| 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 |
| CMR | Carcinogenic, Mutagenic or toxic for Reproduction |
| EH40/2005 | EH40/2005 Workplace exposure limits, Table 1: List of approved workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |

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| Abbr. | Descriptions of used abbreviations |
|--------|---|
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| IMDG | International Maritime Dangerous Goods Code |
| MARPOL | International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant) |
| NLP | No-Longer Polymer |
| PBT | Persistent, Bioaccumulative and Toxic |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail) |
| vPvB | very Persistent and very Bioaccumulative |

Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU Regulation (EC) No. 1272/2008 (CLP, EU GHS)

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

| Code | Text |
|------|----------------------------|
| H300 | fatal if swallowed |
| H311 | toxic in contact with skin |

Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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