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

Monocrotaline ≥99 %

article number: **3418** Version: **3.0 en** Replaces version of: 2022-06-03 Version: (2)

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

1.1 Product identifier

Monocrotaline ≥99 %
3418
628-506-2
315-22-0

1.2 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 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

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	Hazard class	Cat- egory	Hazard class and category	Hazard statement
3.10	Acute toxicity (oral)	3	Acute Tox. 3	H301
3.6	Carcinogenicity	2	Carc. 2	H351

For full text of abbreviations: see SECTION 16



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

Monocrotaline ≥99 %

article number: 3418

2.2 Label elements

Labelling

Signal word Danger

Pictograms

GHS06, GHS08



Hazard statements

H301	Toxic if swallowed
H351	Suspected of causing cancer

Precautionary statements

Precautionary statements - prevention

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

Precautionary statements - response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor
P330	Rinse mouth

For professional users only

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	Monocrotaline
Molecular formula	$C_{16}H_{23}NO_{6}$
Molar mass	325,4 ^g / _{mol}
CAS No	315-22-0
EC No	628-506-2

•			
Specific Conc. Limits	M-Factors	ΑΤΕ	Exposure route
-	-	100 ^{mg} / _{kg}	oral

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

Monocrotaline ≥99 %

article number: 3418

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

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

Following skin contact

Rinse skin with water/shower.

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. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

4.2 Most important symptoms and effects, both acute and delayed

Following ingestion: Abdominal pain, Gastrointestinal complaints, Malaise, Diarrhoea, Nausea, Vomiting

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. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.



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

Monocrotaline ≥99 %

article number: 3418

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.

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

Avoid exposure. 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. Keep in a cool 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: 2 - 8 °C

7.3 Specific end use(s)

No information available.



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

Monocrotaline ≥99 %



article number: 3418

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-C Ceiling value is a limit value above which exposure should not occur i Inhalable fraction r Respirable fraction STFI Short-term exposure limit: a limit value above which exposure should not occur and which is

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15minute period (unless otherwise specified)

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 consider-able 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)

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

Monocrotaline ≥99 %

article number: 3418

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

FormpowderColourlight beigeOdourodourlessMelting point/freezing point197 - 202 °CBoiling point or initial boiling point and boiling rangenot determinedFlammabilitythis material is combustible, but will not ignite readilyLower and upper explosion limitnot determinedFlash pointnot determinedAuto-ignition temperaturenot determinedDecomposition temperaturenot applicableKinematic viscositynot relevantSolubility(ies) Water solubilitynot determinedVapour pressurenot determinedVapour pressurenot determined	Physical state	solid
OdourodourlessMelting point/freezing point197 - 202 °CBoiling point or initial boiling point and boiling rangenot determinedFlammabilitythis material is combustible, but will not ignite readilyLower and upper explosion limitnot determinedFlash pointnot determinedAuto-ignition temperaturenot determinedDecomposition temperaturenot determinedPH (value)not applicableKinematic viscositynot relevantSolubility(ies)not determinedWater solubilitynot determinedPartition coefficient Partition coefficient n-octanol/water (log value):this information is not available	Form	powder
Melting point/freezing point197 - 202 °CBoiling point or initial boiling point and boiling rangenot determinedFlammabilitythis material is combustible, but will not ignite readilyLower and upper explosion limitnot determinedFlash pointnot applicableAuto-ignition temperaturenot determinedDecomposition temperaturenot relevantPH (value)not relevantSolubility(ies) Water solubilitynot determinedPartition coefficient Partition coefficient n-octanol/water (log value)not determined	Colour	light beige
Boiling point or initial boiling point and boiling rangenot determinedFlammabilitythis material is combustible, but will not ignite readilyLower and upper explosion limitnot determinedFlash pointnot applicableAuto-ignition temperaturenot determinedDecomposition temperaturenot relevantpH (value)not applicableKinematic viscositynot relevantSolubility(ies)not determinedWater solubilitynot determinedPartition coefficient Partition coefficient n-octanol/water (log value):this information is not available	Odour	odourless
rangeFileFlammabilitythis material is combustible, but will not ignite readilyLower and upper explosion limitnot determinedFlash pointnot applicableAuto-ignition temperaturenot determinedDecomposition temperaturenot relevantpH (value)not applicableKinematic viscositynot relevantSolubility(ies)not determinedWater solubilitynot determinedPartition coefficientnot determinedPartition coefficient n-octanol/water (log value):this information is not available	Melting point/freezing point	197 – 202 °C
Lower and upper explosion limitnot determinedFlash pointnot applicableAuto-ignition temperaturenot determinedDecomposition temperaturenot relevantpH (value)not applicableKinematic viscositynot relevantSolubility(ies)not determinedWater solubilitynot determinedPartition coefficienthot determinedPartition coefficient n-octanol/water (log value):this information is not available		not determined
Flash pointnot applicableAuto-ignition temperaturenot determinedDecomposition temperaturenot relevantpH (value)not applicableKinematic viscositynot relevantSolubility(ies)not determinedWater solubilitynot determinedPartition coefficientnot determinedPartition coefficient n-octanol/water (log value):this information is not available	Flammability	this material is combustible, but will not ignite readily
Auto-ignition temperaturenot determinedDecomposition temperaturenot relevantpH (value)not applicableKinematic viscositynot relevantSolubility(ies)not determinedWater solubilitynot determinedPartition coefficientnot determinedPartition coefficient n-octanol/water (log value):this information is not available	Lower and upper explosion limit	not determined
Decomposition temperaturenot relevantpH (value)not applicableKinematic viscositynot relevantSolubility(ies)not determinedWater solubilitynot determinedPartition coefficienthot availablePartition coefficient n-octanol/water (log value):this information is not available	Flash point	not applicable
pH (value)not applicableKinematic viscositynot relevantSolubility(ies)mot determinedWater solubilitynot determinedPartition coefficientthis information is not available	Auto-ignition temperature	not determined
Kinematic viscositynot relevantSolubility(ies) Water solubilitynot determinedPartition coefficient Partition coefficient n-octanol/water (log value):this information is not available	Decomposition temperature	not relevant
Solubility(ies) Water solubility Partition coefficient Partition coefficient n-octanol/water (log value): this information is not available	pH (value)	not applicable
Water solubilitynot determinedPartition coefficientreaction coefficient n-octanol/water (log value):this information is not available	Kinematic viscosity	not relevant
Partition coefficient Partition coefficient n-octanol/water (log value): this information is not available	Solubility(ies)	
Partition coefficient n-octanol/water (log value): this information is not available	Water solubility	not determined
	Partition coefficient	
Vapour pressure not determined	Partition coefficient n-octanol/water (log value):	this information is not available
Vapour pressure not determined		
	Vapour pressure	not determined
Density and/or relative density	Density and/or relative density	
Density 1,35 ^g / _{cm³} at 20 °C	Density	1,35 ^g / _{cm³} at 20 °C



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

Monocrotaline ≥99 %

® Roth

	article	number:	3418
--	---------	---------	------

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 t classes:	o physical hazard	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristi	cs:	There is no additional information.
CTION 10. Stability a	nd roactivity	

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, Strong alkali, 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.

Acute toxicity					
Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	66 ^{mg} / _{kg}	rat		TOXNET

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.

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

Monocrotaline ≥99 %



article number: 3418

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

Suspected of causing cancer.

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

diarrhoea, vomiting, abdominal pain, Causes damage to liver through prolonged or repeated exposure if swallowed

• If in eyes

Data are not available.

• If inhaled

Data are not available.

• If on skin

Data are not available.

• Other information

Substance not yet fully tested.

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

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Theoretical Oxygen Demand (without nitrification): 1,77 ^{mg}/_{mg} Theoretical Oxygen Demand (with nitrification): 1,967 ^{mg}/_{mg} Theoretical Carbon Dioxide: 2,164 ^{mg}/_{mg}

12.3 Bioaccumulative potential

Data are not available.

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

Monocrotaline ≥99 %

article number: 3418

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.

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. 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

HP 6 acute toxicity

HP 7 carcinogenic

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

ADRRID	UN 1544
IMDG-Code	UN 1544
ICAO-TI	UN 1544
UN proper shipping name	
ADRRID	ALKALOIDS, SOLID, N.O.S.
IMDG-Code	ALKALOIDS, SOLID, N.O.S.
ICAO-TI	Alkalaide calid p.a.e.
ICAU-11	Alkaloids, solid, n.o.s.

14.2



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

Monocrotaline ≥99 %

® §ROTH

articla	number:	2/10
article	numper:	5410

	Technical name	Monocrotaline
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

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

Proper shipping name	ALKALOIDS, SOLID, N.O.S.
Particulars in the transport document	UN1544, ALKALOIDS, SOLID, N.O.S., (Mono- crotaline), 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
Transport category (TC)	2
Tunnel restriction code (TRC)	E
Hazard identification No	60
Emergency Action Code	2X
Regulations concerning the International Carria information	ge of Dangerous Goods by Rail (RID)Additional
Classification code	T2
Danger label(s)	6.1

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

Monocrotaline ≥99 %



article number: 3418	
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 Co	ode (IMDG) - Additional information
Proper shipping name	ALKALOIDS, SOLID, N.O.S.
Particulars in the shipper's declaration	UN1544, ALKALOIDS, SOLID, N.O.S., (Mono- crotaline), 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 (IC	CAO-IATA/DGR) - Additional information
Proper shipping name	Alkaloids, solid, n.o.s.
Particulars in the shipper's declaration	UN1544, Alkaloids, solid, n.o.s., (Monocrotaline), 6.1, III
Danger label(s)	6.1
Special provisions (SP)	A3, A5, A6
Excepted quantities (EQ)	E1
Limited quantities (LQ)	10 kg

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) Seveso Directive

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

Monocrotaline ≥99 %



article number: 3418

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

Notation

41) - Category 2, all exposure routes

- category 3, inhalation exposure route

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)

List of pollutants (WFD)

Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
Monocrotaline	Substances and preparations, or the breakdown products of such, which have been proved to pos- sess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine- related functions in or via the aquatic environment		a)	

Legend

a) Indicative list of the main pollutants

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

Regulation concerning the export and import of hazardous chemicals (PIC) not listed

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

Monocrotaline ≥99 %

article number: 3418

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

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
TW	TCSI	substance is listed
VN	NCI	substance is listed
Legend		

Legend NCI TCSI

National Chemical Inventory 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- relev- ant
2.2		Hazard statements: change in the listing (table)	yes
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.	yes
14.2	ICAO-TI: Alkaloid salts, solid, n.o.s.	ICAO-TI: Alkaloids, solid, n.o.s.	yes
14.8	Proper shipping name: Alkaloid salts, solid, n.o.s.	Proper shipping name: Alkaloids, solid, n.o.s.	yes
14.8	Particulars in the shipper's declaration: UN1544, Alkaloid salts, solid, n.o.s., (Mono- crotaline), 6.1, III	Particulars in the shipper's declaration: UN1544, Alkaloids, solid, n.o.s., (Monocrotaline), 6.1, III	yes
15.1	VOC content: 0 % 0 ^g / _l	VOC content: 0 %	yes
15.1		VOC content: 0 ^g / _l	yes
15.1		National inventories: change in the listing (table)	yes



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

Monocrotaline ≥99 %



article number: 3418

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)
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 identi- fier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
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 Na- tions
ΙΑΤΑ	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
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
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

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

Monocrotaline ≥99 %



article number: 3418

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.
H351	Suspected of causing cancer.

Disclaimer

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