SAFETY DATA SHEET

Rugby 200 CS

Version	Revision Date:	SDS Number:	Date of last issue: -
3.1	23.08.2022	50000162	Date of first issue: 23.08.2022

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

1.1 Product identifier

Product name Rugby 200 CS

Other means of identification

Product code 50000162

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

Use of the Sub-stance/Mixture : Insecticide

Recommended restrictions on use : Use as recommended by the label.

1.3 Details of the supplier of the safety data sheet

Supplier Address

FMC CHEMICALS (PTY) LTD
COMPANY REGISTRATION NUMBER: 1988/001451/07
WEST END OFFICE PARK, BUILDING C
CNR. WEST AVE & HALL STREET
CENTURION, 0014
SOUTH AFRICA

E-mail address: SDS-Info@fmc.com (E-Mail General Information)

1.4 Emergency telephone

For leak, fire, spill or accident emergencies, call:
South Africa: 0-800-983-611 (CHEMTREC)

Medical emergency:
For any emergency or poisoning contact: Griffon Poison Information Centre (24 hrs) - +27-(0)-82-446-8946

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 4	H332: Harmful if inhaled.

Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Specific target organ toxicity - single exposure, Category 2, Peripheral nervous system, Central nervous system	H371: May cause damage to organs.
Specific target organ toxicity - repeated exposure, Category 2, Blood, Central nervous system	H373: May cause damage to organs through prolonged or repeated exposure.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal Word : Warning

Hazard Statements :

H302 + H332 Harmful if swallowed or if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H371 May cause damage to organs (Peripheral nervous system, Central nervous system).
H373 May cause damage to organs (Blood, Central nervous system) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements :

Prevention:

P260 Do not breathe mist or vapors.
P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P391 Collect spillage.

Hazardous ingredients which must be listed on the label:

S,S-di-sec-butyl O-ethyl phosphorodithioate
hexamethylenediamine
Naphthenic acids, copper salts

Additional Labeling

EUH208 Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
S,S-di-sec-butyl O-ethyl phosphorodithioate	95465-99-9	Acute Tox. 2; H300 Acute Tox. 1; H330 Acute Tox. 1; H310 STOT SE 1; H370 (Central nervous system, Peripheral nervous system) STOT RE 1; H372 (Central nervous system, Peripheral nervous system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100	>= 10 - < 20
Solvent naphtha (petroleum), heavy arom.	64742-94-5 265-198-5 649-424-00-3	Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 2.5 - < 10
orthophosphoric acid	7664-38-2 231-633-2 015-011-00-6	Skin Corr. 1B; H314 Eye Dam. 1; H318 Aquatic Chronic 3; H412	>= 1 - < 2.5
2-ethylhexanoic acid, copper salt	22221-10-9 244-846-0	Acute Tox. 4; H312 Eye Dam. 1; H318 Repr. 2; H361 Aquatic Chronic 1; H410	>= 0.1 - < 0.25

		M-Factor (Chronic aquatic toxicity): 1	
Naphthenic acids, copper salts	1338-02-9 215-657-0 029-003-00-5	Flam. Liq. 3; H226 Acute Tox. 3; H301 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10	>= 0.1 - < 0.25
1,2-benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411 M-Factor (Acute aquatic toxicity): 10	>= 0.0025 - < 0.025

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

Protection of first-aiders : Avoid inhalation, ingestion and contact with skin and eyes.

If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : If on clothes, remove clothes.
If on skin, rinse well with water.
Wash off with soap and plenty of water.
Get medical attention if irritation develops and persists.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.

Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

Risks : Harmful if swallowed or if inhaled.
Causes skin irritation.
Causes serious eye irritation.
May cause damage to organs.
May cause damage to organs through prolonged or repeated exposure.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Dry chemical, CO2, water spray or regular foam.

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Hazardous combustion products
phosphorus oxides
Carbon oxides
Sulfur oxides
Ammonia
Thermal decomposition can lead to release of irritating gases and vapors.

5.3 Advice for firefighters

Special protective equipment for fire-fighters : Firefighters should wear protective clothing and self-contained breathing apparatus.

Wear self-contained breathing apparatus for firefighting if necessary.

Specific extinguishing methods	:	Remove undamaged containers from fire area if it is safe to do so. Use a water spray to cool fully closed containers.
Further information	:	Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. If it can be safely done, stop the leak. Do not touch or walk through the spilled material. Remove all sources of ignition.

6.2 Environmental precautions

Environmental precautions	:	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	:	Never return spills in original containers for re-use. Collect as much of the spill as possible with a suitable absorbent material. Pick up and transfer to properly labeled containers. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling	:	Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection. Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of ignition.
Hygiene measures	:	Avoid contact with skin, eyes and clothing. Provide adequate ventilation. When using do not eat or drink. When using do not smoke. Wash hands before breaks and immediately after handling the product. Do not inhale aerosol. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	No smoking. Keep in a well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.
Further information on storage stability	:	No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s)	:	Registered pesticide to be used in accordance with a label approved by country-specific regulatory authorities.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
orthophosphoric acid	7664-38-2	OEL-RL	2 mg/m3	ZA OEL
Further information	Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			
		OEL- RL STEL/C	6 mg/m3	ZA OEL
Further information	Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			
		TWA	1 mg/m3	2000/39/EC
		STEL	2 mg/m3	2000/39/EC

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Routes of exposure	Potential health effects	Value
urea	Workers	Inhalation	Long-term systemic effects	292 mg/m3
	Workers	Inhalation	Acute systemic effects	292 mg/m3
	Workers	Dermal	Long-term systemic effects	580 mg/kg bw/day
	Workers	Dermal	Acute systemic effects	580 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	125 mg/m3
	Consumers	Inhalation	Acute systemic effects	125 mg/m3
	Consumers	Dermal	Long-term systemic effects	580 mg/kg bw/day
	Consumers	Dermal	Acute systemic effects	580 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	42 mg/kg bw/day
	Consumers	Oral	Acute systemic effects	42 mg/kg bw/day
hexamethylenediamine	Workers	Inhalation	Long-term local effects	0.54 mg/m3
	Workers	Inhalation	Acute local effects	1.62 mg/m3
	Consumers	Inhalation	Long-term local effects	0.4 mg/m3
	Consumers	Inhalation	Acute local effects	1.2 mg/m3
	Consumers	Oral	Long-term systemic effects	0.17 mg/kg bw/day
orthophosphoric acid	Workers	Inhalation	Long-term systemic effects	10.7 mg/m3
	Consumers	Inhalation	Long-term systemic effects	4.57 mg/m3
	Consumers	Oral	Long-term systemic	0.1 mg/kg

			effects	bw/day
	Consumers	Inhalation	Long-term local effects	0.36 mg/m3
	Workers	Inhalation	Long-term local effects	1 mg/m3
2-ethylhexanoic acid, copper salt	Workers	Inhalation	Long-term systemic effects	0.69 mg/m3
	Workers	Dermal	Long-term systemic effects	0.390 mg/kg
	Consumers	Inhalation	Long-term systemic effects	0.170 mg/m3
	Consumers	Dermal	Long-term systemic effects	0.2 mg/kg
	Consumers	Oral	Long-term systemic effects	0.2 mg/kg
Naphthenic acids, copper salts	Workers	Inhalation	Long-term systemic effects	0.63 mg/m3
	Workers	Dermal	Long-term systemic effects	0.36 mg/m3
	Consumers	Inhalation	Long-term systemic effects	0.16 mg/m3
	Consumers	Dermal	Long-term systemic effects	0.18 mg/kg
	Consumers	Oral	Long-term systemic effects	0.18 mg/kg
1,2-benzisothiazol-3(2H)-one	Workers	Inhalation	Long-term systemic effects	6.81 mg/m3
	Workers	Dermal	Long-term systemic effects	0.966 mg/kg
	Consumers	Inhalation	Long-term systemic effects	1.2 mg/m3
	Consumers	Dermal	Long-term systemic effects	0.345 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
urea	Fresh water	0.47 mg/l
	Sea water	0.047 mg/l
hexamethylenediamine	Fresh water	0.42 mg/l
	Sea water	0.04 mg/l
	Sewage treatment plant	29.1 mg/l
	Fresh water sediment	65.35 mg/kg dry weight (d.w.)
	Sea sediment	6.54 mg/kg dry weight (d.w.)
	Soil	3.52 mg/kg dry weight (d.w.)
Naphthenic acids, copper salts	Fresh water	5.62 µg/l
	Sea water	0.562 µg/l
	Fresh water sediment	28 mg/kg
	Sea sediment	2.8 mg/kg
	Soil	5.6 mg/kg
	Sewage treatment plant	130 µg/l
2-ethylhexanoic acid, copper salt	Fresh water	0.04105 mg/l

	Intermittent use/release	0.493 mg/l
	Sea water	0.02737 mg/l
	Sewage treatment plant	1.21 mg/l
	Fresh water sediment	457.9 mg/kg dry weight (d.w.)
	Sea sediment	3557.9 mg/kg dry weight (d.w.)
	Soil	342.1 mg/kg dry weight (d.w.)
1,2-benzisothiazol-3(2H)-one	Fresh water	0.00403 mg/l
	Sea water	0.000403 mg/l
	Sewage treatment plant	1.03 mg/l
	Fresh water sediment	0.0499 mg/l
	Sea sediment	0.00499 mg/l

8.2 Exposure controls

Personal protective equipment

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Hand protection
Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.

Protective measures : Plan first aid action before beginning work with this product.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : viscous liquid

Color : light green

Odor : characteristic

Odor Threshold : No data available

pH : No data available

Melting point/range : No data available

Boiling point/boiling range	:	72 °C
Flash point	:	> 72 °C
Evaporation rate	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	1.0633 (20 °C)
Density	:	1.0633 g/cm3 (20 °C)
Solubility(ies)		
Water solubility	:	soluble
Solubility in other solvents	:	Solvent: Toluene Description: insoluble Solvent: Methanol Description: insoluble
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	239.34 mPa.s (20 °C)
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing

9.2 Other information

Molecular weight	:	Not applicable
Self-ignition	:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : No decomposition if stored and applied as directed.

Vapors may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid : Avoid extreme temperatures.
Avoid formation of aerosol.
Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Avoid strong acids, bases, and oxidizers.

10.6 Hazardous decomposition products

Stable under recommended storage conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed or if inhaled.

Product:

Acute oral toxicity : LD50 (Rat): 1,097 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 3.87 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Components:

S,S-di-sec-butyl O-ethyl phosphorodithioate:

Acute oral toxicity : LD50 (Rat): 37.1 mg/kg

LD50 (Mouse): 71.4 mg/kg

Acute inhalation toxicity : LC50 (Rat): 0.026 mg/l
Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit, male): 24.4 mg/kg

LD50 (Rabbit, female): 41.8 mg/kg

Solvent naphtha (petroleum), heavy arom.:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 4.688 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

orthophosphoric acid:

Acute oral toxicity : LD50 (Rat, female): 2,600 mg/kg
Method: OECD Test Guideline 423

2-ethylhexanoic acid, copper salt:

Acute oral toxicity : LD50 Oral (Rat, female): 2,043 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat, male and female): 2,000 mg/kg
Method: OECD Test Guideline 402

Naphthenic acids, copper salts:

Acute oral toxicity : LD50 (Rat, male and female): 300 - 500 mg/kg
Method: OECD Test Guideline 423
Remarks: Based on data from similar materials

Acute toxicity estimate: 300 mg/kg
Method: Calculation method

Acute dermal toxicity : LD50 (Rabbit, male and female): 3,160 mg/kg
Method: OECD Test Guideline 402
Symptoms: Lethargy, Diarrhea, anorexia
Remarks: Based on data from similar materials

1,2-benzisothiazol-3(2H)-one:

Acute oral toxicity : Acute toxicity estimate: 500.0 mg/kg
Method: Converted acute toxicity point estimate

LD50 (Rat, male and female): 490 mg/kg

Method: OECD Test Guideline 401

Acute toxicity estimate: 490 mg/kg
Method: Calculation method

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Causes skin irritation.

Product:

Species : Rabbit
Assessment : Not classified as irritant
Result : slight or no skin irritation.

Remarks : Extremely corrosive and destructive to tissue.

Components:

S,S-di-sec-butyl O-ethyl phosphorodithioate:

Species : Rabbit
Result : No skin irritation

Solvent naphtha (petroleum), heavy arom.:

Species : Rabbit
Assessment : Repeated exposure may cause skin dryness or cracking.
Result : No skin irritation
Remarks : Minimal effects that do not meet the threshold for classification.
Based on data from similar materials

orthophosphoric acid:

Species : Rabbit
Result : Corrosive after 3 minutes to 1 hour of exposure

2-ethylhexanoic acid, copper salt:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Naphthenic acids, copper salts:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

1,2-benzisothiazol-3(2H)-one:

Species : Rabbit

Exposure time	:	72 h
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Species	:	Rabbit
Assessment	:	Not classified as irritant
Result	:	Slight or no eye irritation
Remarks	:	May cause irreversible eye damage.

Components:

S,S-di-sec-butyl O-ethyl phosphorodithioate:

Species	:	Rabbit
Result	:	No eye irritation

Solvent naphtha (petroleum), heavy arom.:

Species	:	Rabbit
Assessment	:	No eye irritation
Remarks	:	Minimal effects that do not meet the threshold for classification. Based on data from similar materials

orthophosphoric acid:

Result	:	Irreversible effects on the eye
Remarks	:	Based on skin corrosivity

2-ethylhexanoic acid, copper salt:

Species	:	Bovine cornea
Method	:	OECD Test Guideline 437
Result	:	Irreversible effects on the eye

Naphthenic acids, copper salts:

Method	:	in vitro eye irritation test
Result	:	No eye irritation

1,2-benzisothiazol-3(2H)-one:

Species	:	Bovine cornea
Method	:	OECD Test Guideline 437
Result	:	No eye irritation
Species	:	Rabbit
Method	:	EPA OPP 81-4
Result	:	Irreversible effects on the eye

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

Species	:	Guinea pig
Assessment	:	Not a skin sensitizer.
Result	:	Not a skin sensitizer.

Components:

S,S-di-sec-butyl O-ethyl phosphorodithioate:

Result	:	Not a skin sensitizer.

Solvent naphtha (petroleum), heavy arom.:

Test Type	:	Maximization Test
Species	:	Guinea pig
Result	:	Not a skin sensitizer.
Remarks	:	Based on data from similar materials

2-ethylhexanoic acid, copper salt:

Test Type	:	Open epicutaneous test
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	Does not cause skin sensitization.

Naphthenic acids, copper salts:

Test Type	:	Maximization Test
Species	:	Guinea pig
Result	:	Causes sensitization.
Remarks	:	Based on data from similar materials

1,2-benzisothiazol-3(2H)-one:

Test Type	:	Maximization Test
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	May cause sensitization by skin contact.

Species	:	Guinea pig
Method	:	FIFRA 81.06
Result	:	May cause sensitization by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Product:

Genotoxicity in vitro	:	Test Type: reverse mutation assay

Result: negative

Components:

Solvent naphtha (petroleum), heavy arom.:

Genotoxicity in vitro : Test Type: reverse mutation assay
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Bone marrow chromosome aberration.
Species: Rat
Application Route: inhalation (vapor)
Result: negative

orthophosphoric acid:

Genotoxicity in vitro : Test Type: reverse mutation assay
Method: OECD Test Guideline 471
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

2-ethylhexanoic acid, copper salt:

Genotoxicity in vitro : Test Type: reverse mutation assay
Method: Mutagenicity (Escherichia coli - reverse mutation assay)
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Method: Mutagenicity (micronucleus test)
Result: negative

Naphthenic acids, copper salts:

Genotoxicity in vitro : Test Type: reverse mutation assay
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Application Route: Ingestion
Exposure time: 48 h
Method: Mutagenicity (micronucleus test)
Result: negative
Remarks: Based on data from similar materials

1,2-benzisothiazol-3(2H)-one:

Genotoxicity in vitro	:	Test Type: gene mutation test Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Ames test Method: OECD Test Guideline 471 Result: negative Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: positive
Genotoxicity in vivo	:	Test Type: unscheduled DNA synthesis assay Species: Rat (male) Cell type: Liver cells Application Route: Ingestion Exposure time: 4 h Method: OECD Test Guideline 486 Result: negative Test Type: Micronucleus test Species: Mouse Application Route: Oral Method: OECD Test Guideline 474 Result: negative
Germ cell mutagenicity- Assessment	:	Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity

Not classified based on available information.

Components:

S,S-di-sec-butyl O-ethyl phosphorodithioate:

Remarks	:	No significant adverse effects were reported

Solvent naphtha (petroleum), heavy arom.:

Species	:	Rat, male and female
Application Route	:	inhalation (vapor)
Exposure time	:	12 month(s)
NOAEC	:	1.8 mg/l
Result	:	negative
Remarks	:	Based on data from similar materials
Carcinogenicity - Assessment	:	Not classifiable as a human carcinogen.

Reproductive toxicity

Not classified based on available information.

Components:

S,S-di-sec-butyl O-ethyl phosphorodithioate:

Effects on fertility : Remarks: No significant adverse effects were reported

orthophosphoric acid:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat, male and female
Application Route: Ingestion
General Toxicity Parent: NOAEL: 500 mg/kg body weight
General Toxicity F1: NOAEL: 500 mg/kg body weight
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Mouse
Application Route: Ingestion
General Toxicity Maternal: NOAEL: 370 mg/kg body weight
Developmental Toxicity: NOAEL: 370 mg/kg body weight
Result: negative
Remarks: Based on data from similar materials

2-ethylhexanoic acid, copper salt:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat
Application Route: Oral

Effects on fetal development : Test Type: reproductive and developmental toxicity study
Species: Rabbit
Application Route: Oral

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

Naphthenic acids, copper salts:

Effects on fertility : Species: Rat, male and female
Application Route: Ingestion
Method: OECD Test Guideline 416
Result: negative
Remarks: Based on data from similar materials

Species: Rat, male and female
Application Route: Ingestion
General Toxicity F1: NOAEL: 100 mg/kg body weight
Remarks: Based on data from similar materials

Effects on fetal development : Species: Rabbit
Application Route: Ingestion
General Toxicity Maternal: NOAEL: 7.5 mg/kg body weight
Developmental Toxicity: NOAEL: 15 mg/kg body weight
Target Organs: Stomach, Kidney
Method: OECD Test Guideline 414
Result: positive

Remarks: Based on data from similar materials

1,2-benzisothiazol-3(2H)-one:

Effects on fertility : Species: Rat, male
Application Route: Ingestion
General Toxicity Parent: NOAEL: 18.5 mg/kg body weight
General Toxicity F1: NOAEL: 48 mg/kg body weight
Fertility: NOAEL: 112 mg/kg bw/day
Symptoms: No effects on reproduction parameters.
Method: OPPTS 870.3800
Result: negative

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

STOT-single exposure

May cause damage to organs (Peripheral nervous system, Central nervous system).

Product:

Target Organs : Peripheral nervous system, Central nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 2.

Components:

S,S-di-sec-butyl O-ethyl phosphorodithioate:

Target Organs : Nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.

STOT-repeated exposure

May cause damage to organs (Blood, Central nervous system) through prolonged or repeated exposure.

Product:

Target Organs : Blood, Central nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Components:

S,S-di-sec-butyl O-ethyl phosphorodithioate:

Target Organs : Nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

1,2-benzisothiazol-3(2H)-one:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

S,S-di-sec-butyl O-ethyl phosphorodithioate:

Species	:	Mouse, male
NOAEL	:	2.45 mg/kg
LOAEL	:	8 mg/kg
Application Route	:	Oral - feed
Exposure time	:	28 d
Dose	:	0.83, 2.45, 8.0
GLP	:	yes
Symptoms	:	Red blood cell acetylcholinesterase inhibition

Species	:	Rat, male
LOAEL	:	4.7 mg/kg
Application Route	:	Oral - feed
Exposure time	:	28 d
Dose	:	0, 4.7, 9.3, 19.6, 39.9, 56.2
GLP	:	yes
Symptoms	:	Red blood cell acetylcholinesterase inhibition

Solvent naphtha (petroleum), heavy arom.:

Species	:	Rat, male and female
NOAEC	:	0.9 - 1.8 mg/l
Application Route	:	inhalation (vapor)
Exposure time	:	12 months

orthophosphoric acid:

Species	:	Rat, male and female
NOAEL	:	250 mg/kg
Application Route	:	Oral - gavage
Exposure time	:	42 - 54 d
Method	:	OECD Test Guideline 422

2-ethylhexanoic acid, copper salt:

Species	:	Mouse
NOAEL	:	180 - 205 mg/kg
Application Route	:	Oral
Exposure time	:	13 weeks

Species	:	Rat
NOAEL	:	2 mg/l
Application Route	:	Inhalation
Exposure time	:	28 d
Method	:	OECD Test Guideline 412

Naphthenic acids, copper salts:

Species	:	Mouse, male and female
NOAEL	:	1,000 mg/l
LOAEL	:	2,000 mg/l
Application Route	:	Ingestion

Method : Regulation (EC) No. 440/2008, Annex, B.26
Remarks : Based on data from similar materials

1,2-benzisothiazol-3(2H)-one:

Species : Rat, male and female
NOAEL : 15 mg/kg
Application Route : Ingestion
Exposure time : 28 d
Method : OECD Test Guideline 407
Symptoms : Irritation

Species : Rat, male and female
NOAEL : 69 mg/kg
Application Route : Ingestion
Exposure time : 90 d
Symptoms : Irritation, Reduced body weight

Aspiration toxicity

Not classified based on available information.

Components:

Solvent naphtha (petroleum), heavy arom.:

May be fatal if swallowed and enters airways.

Experience with human exposure

Components:

Solvent naphtha (petroleum), heavy arom.:

Skin contact : Symptoms: Repeated exposure may cause skin dryness or cracking.

Neurological effects

Components:

S,S-di-sec-butyl O-ethyl phosphorodithioate:

Remarks : Causes neurotoxicity following acute and prolonged exposure

Further information

Product:

Remarks : No data available

Components:

Solvent naphtha (petroleum), heavy arom.:

Remarks : Vapour concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic and may have other central nervous system effects. Prolonged and/or repeated

skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 88.86 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia similis (Water flea)): 0.034 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Selenastrum capricornutum (green algae)): 53.60 mg/l Exposure time: 96 h
Toxicity to soil dwelling organisms	:	90.94 mg/kg Exposure time: 14 d Species: Eisenia fetida (earthworms)
Toxicity to terrestrial organisms	:	LD50: 650 mg/kg Species: Coturnix japonica (Japanese quail)
		LD50: 73.10 Exposure time: 48 h Species: Apis mellifera (bees)

Components:

S,S-di-sec-butyl O-ethyl phosphorodithioate:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.13 mg/l Exposure time: 96 h
		LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.17 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia): 0.0013 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (algae): 5.3 mg/l Exposure time: 96 h
M-Factor (Acute aquatic toxicity)	:	100
Toxicity to fish (Chronic toxicity)	:	NOEC: 0.0052 mg/l Exposure time: 21 d Species: Fish
Toxicity to daphnia and other	:	NOEC: 0.00023 mg/l

aquatic invertebrates (Chronic toxicity)		Exposure time: 21 d
M-Factor (Chronic aquatic toxicity)	:	100
Toxicity to terrestrial organisms	:	LD50: 1.08 µg/bee Species: Apis mellifera (bees) Remarks: Contact LD50: 2.07 µg/bee Species: Apis mellifera (bees) Remarks: Oral LD50: 16.1 mg/kg Species: Colinus virginianus (Bobwhite quail)

Solvent naphtha (petroleum), heavy arom.:

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): 1.4 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (green algae)): 1 - 3 mg/l Exposure time: 24 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	LL50 (Tetrahymena pyriformis): 677.9 mg/l Exposure time: 72 h Test Type: Growth inhibition
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EL50: 0.89 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

orthophosphoric acid:

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 (activated sludge): > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

2-ethylhexanoic acid, copper salt:

Toxicity to fish	:	LC50 (Oryzias latipes (Orange-red killifish)): 180 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 85.4 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	NOEC (Lemna minor (duckweed)): 0.030 mg/l Exposure time: 7 d Remarks: Based on data from similar materials NOEC (Desmodesmus subspicatus (green algae)): 49.3 mg/l Exposure time: 96 h
Toxicity to microorganisms	:	EC50 (Pseudomonas putida): 112.1 mg/l Exposure time: 17 h Method: DIN 38 412 Part 8
Toxicity to fish (Chronic toxicity)	:	NOEC: 0.0022 mg/l Species: Oncorhynchus mykiss (rainbow trout) Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 25 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211 Chronic Toxicity Value: 75 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211 Chronic Toxicity Value: 63 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211
M-Factor (Chronic aquatic toxicity)	:	1

Naphthenic acids, copper salts:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 38.4 µg/l Exposure time: 96 h Test Type: flow-through test Remarks: Based on data from similar materials LC50 (Pimephales promelas (fathead minnow)): 5.62 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 20 mg/l Exposure time: 48 h

Test Type: semi-static test
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 29.6 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

M-Factor (Acute aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (Vibrio fischerii (Bacteria)): 13 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOEC: 18.9 µg/l
Exposure time: 7 d
Species: Pimephales promelas (fathead minnow)

NOEC: 120 µg/l
End point: mortality
Exposure time: 64 d
Species: Fish
Method: OECD Test Guideline 204

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 6.3 µg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia (water flea)
Remarks: Based on data from similar materials

NOEC: 4 µg/l
Exposure time: 7 d
Species: Ceriodaphnia dubia (water flea)
Remarks: Based on data from similar materials

M-Factor (Chronic aquatic toxicity) : 10

1,2-benzisothiazol-3(2H)-one:

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): 16.7 mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Oncorhynchus mykiss (rainbow trout)): 2.15 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.9 mg/l
Exposure time: 48 h
Test Type: static test

Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.070 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.04 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (activated sludge): 24 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

EC50 (activated sludge): 12.8 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

12.2 Persistence and degradability

Product:

Biodegradability : Result: Not readily biodegradable.

Components:

Solvent naphtha (petroleum), heavy arom.:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 58.6 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

orthophosphoric acid:

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

2-ethylhexanoic acid, copper salt:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 99 %
Exposure time: 28 d
Method: OECD Test Guideline 301E

Naphthenic acids, copper salts:

Biodegradability : Result: Inherently biodegradable.
Remarks: Based on data from similar materials

1,2-benzisothiazol-3(2H)-one:

Biodegradability : Result: rapidly biodegradable
Method: OECD Test Guideline 301C

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Components:

S,S-di-sec-butyl O-ethyl phosphorodithioate:

Bioaccumulation : Bioconcentration factor (BCF): 220

Partition coefficient: n-octanol/water : log Pow: 3.9

Solvent naphtha (petroleum), heavy arom.:

Bioaccumulation : Remarks: The product/substance has a potential to bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: 3.72
Method: QSAR

2-ethylhexanoic acid, copper salt:

Partition coefficient: n-octanol/water : log Pow: 2.96

Naphthenic acids, copper salts:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Exposure time: 4 d
Bioconcentration factor (BCF): 2

Partition coefficient: n-octanol/water : log Pow: 7.65

1,2-benzisothiazol-3(2H)-one:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Exposure time: 56 d
Bioconcentration factor (BCF): 6.62
Method: OECD Test Guideline 305
Remarks: This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

Partition coefficient: n-octanol/water : log Pow: 0.7 (20 °C)
pH: 7

log Pow: 0.99 (20 °C)
pH: 5

12.4 Mobility in soil

Components:

S,S-di-sec-butyl O-ethyl phosphorodithioate:

Distribution among environmental compartments : Remarks: Moderately mobile in soils

Solvent naphtha (petroleum), heavy arom.:

Distribution among environmental compartments : Remarks: Expected to partition to sediment and wastewater solids. Moderately volatile.

1,2-benzisothiazol-3(2H)-one:

Distribution among environmental compartments : Koc: 9.33, log Koc: 0.97
Method: OECD Test Guideline 121

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product:

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Do not re-use empty containers.

Packaging that is not properly emptied must be disposed of as the unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number

IMDG : UN 3082

IATA : UN 3082

14.2 UN proper shipping name

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Cadusafos)
(, hexamethylenediamine, Copper naphthenate)

IATA : Environmentally hazardous substance, liquid, n.o.s.
(Cadusafos)
(Cadusafos, hexamethylenediamine)

14.3 Transport hazard class(es)

IMDG : 9

IATA : 9

14.4 Packing group

IMDG

Packing group : III
Labels : 9
EmS Code : F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

14.5 Environmental hazards

IMDG

Marine pollutant : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data

Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

The ingredients of this product are reported in the following inventories:

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	Product contains substance(s) not listed on TSCA inventory.
AIIC	:	Not in compliance with the inventory
DSL	:	This product contains the following components that are not on the Canadian DSL nor NDSL.
ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	Not in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
TECI	:	Not in compliance with the inventory

15.2 Chemical Safety Assessment

A chemical safety assessment is not required for this product (mixture).

SECTION 16: Other information

Full text of H-Statements

H226	:	Flammable liquid and vapor.
H300	:	Fatal if swallowed.
H301	:	Toxic if swallowed.
H302	:	Harmful if swallowed.
H304	:	May be fatal if swallowed and enters airways.
H310	:	Fatal in contact with skin.
H312	:	Harmful in contact with skin.
H314	:	Causes severe skin burns and eye damage.
H315	:	Causes skin irritation.

H317	:	May cause an allergic skin reaction.
H318	:	Causes serious eye damage.
H330	:	Fatal if inhaled.
H361	:	Suspected of damaging fertility or the unborn child.
H370	:	Causes damage to organs.
H372	:	Causes damage to organs through prolonged or repeated exposure.
H400	:	Very toxic to aquatic life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.
EUH066	:	Repeated exposure may cause skin dryness or cracking.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Eye Dam.	:	Serious eye damage
Flam. Liq.	:	Flammable liquids
Repr.	:	Reproductive toxicity
Skin Corr.	:	Skin corrosion
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitization
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
ZA OEL	:	South Africa. The Regulations for Hazardous Chemical Agents, Occupational Exposure Limits
2000/39/EC / TWA	:	Limit Value - eight hours
2000/39/EC / STEL	:	Short term exposure limit
ZA OEL / OEL-RL	:	Occupational Exposure Limit Restricted limit - 8- hour exposure or equivalent (12 hour shifts)
ZA OEL / OEL- RL STEL/C	:	Occupational Exposure Limit Restricted limit - Short term occupational exposure limits / ceiling limits

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified;

NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Classification of the mixture:		**Classification procedure:**
Acute Tox. 4	H302	Based on product data or assessment
Acute Tox. 4	H332	Based on product data or assessment
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
STOT SE 2	H371	Based on product data or assessment
STOT RE 2	H373	Based on product data or assessment
Aquatic Acute 1	H400	Based on product data or assessment
Aquatic Chronic 1	H410	Calculation method

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