

Colanyl Yellow H3G 131

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Substance key: 000000598066

Revision Date: 05.01.2023

Version : 4 - 0 / EU

Date of printing : 01.02.2023

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

1.1. Product identifier

Trade name

Colanyl Yellow H3G 131

Material number: 288530

Chemical nature: C.I. Pigment Yellow 154 - Nanoform

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

Relevant identified uses of the substance or mixture

Industry sector :	Varnish industry Plastic processing industry. Printing Inks Industry Techno-chemical industry.
Type of use :	Colouring agent

1.3. Details of the supplier of the safety data sheet

Identification of the company

Heubach Colorants Germany GmbH
Brüningstraße 50
65929 Frankfurt am Main
Telephone no. : +49 69 305 13619

Information about the substance/mixture

Product Stewardship
e-mail: SDS.PI.Europe@clariant.com

1.4. Emergency telephone number

00800-5121 5121 (24 h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Additional Labelling

EUH210 Safety data sheet available on request.

EUH208 Contains 1,2-Benzisothiazol-3(2H)-one, reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

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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.

Ecological information: 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.

Toxicological information: 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.

No hazards to be specially mentioned.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
1,2-Benzisothiazol-3(2H)-one	2634-33-5 220-120-9 613-088-00-6 01-2120761540-60	Acute Tox. 4; H302 Acute Tox. 2; H330 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): 1 specific concentration limit Skin Sens. 1; H317 >= 0,05 %	>= 0,0025 - < 0,025
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	55965-84-9 613-167-00-5 01-2120764691-48	Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 2; H310 Skin Corr. 1C; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH071	>= 0,0002 - < 0,0015

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		<p>M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100</p> <hr/> <p>specific concentration limit Skin Corr. 1C; H314 >= 0,6 % Skin Irrit. 2; H315 0,06 - < 0,6 % Eye Irrit. 2; H319 0,06 - < 0,6 % Skin Sens. 1A; H317 >= 0,0015 % Eye Dam. 1; H318 >= 0,6 %</p>	
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For explanation of abbreviations see section 16.

This substance/ mixture contains nanoforms

Components:

Nano C.I. Pigment Yellow 154:

Particle characteristics

- Particle Size Distribution : D10 = 0,035 µm ± 0,025 µm
D50 = 0,065 µm ± 0,045 µm
D90 = 0,135 µm ± 0,095 µm
Measurement technique: TEM
- Dustiness : Number-Based Dustiness Index: 31.650 1/mg
Measurement method: DIN EN 17199-3: Continuous drop method
SMPS
- Number-Based Dustiness Index: 1.389 1/mg
Measurement method: DIN EN 17199-3: Continuous drop method
OPS
- Specific surface area : 32,5 m2/g ± 27,5 m2/g
Measurement technique: Brunauer, Emmett and Teller (BET) method using Nitrogen
- Assessment : Assessment: This substance/ mixture contains nanoforms
Total Content of Nanomaterials: 60 - 100 %
- Shape : Shape: cubes
Fraction (Weight): 20 - 100 %
Measurement technique: TEM

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Shape: spheres
Fraction (Weight): 0 - 50 %
Measurement technique: TEM

Shape: rods
Fraction (Weight): 0 - 30 %
Measurement technique: TEM

Crystallinity : Crystallinity: crystalline
Measurement technique: X-ray Diffraction (XRD)

Surface treatment /Coatings : Surface treatment /Coatings: no

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Get medical advice/ attention if you feel unwell.
- If inhaled : Move the victim to fresh air.
If you feel unwell, seek medical advice (show the label where possible).
- In case of skin contact : IF ON SKIN: Wash with plenty of soap and water.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- If swallowed : If swallowed, seek medical advice immediately and show this container or label.

4.2 Most important symptoms and effects, both acute and delayed

- Risks : No additional hazards are known except those derived from the labelling.

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 : Water spray jet
Dry powder
Carbon dioxide (CO₂)
Alcohol-resistant foam
- Unsuitable extinguishing media : High volume water jet

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5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : In case of fire hazardous decomposition products may be produced such as:
Carbon oxides
Nitrogen oxides (NOx)
Hydrogen fluoride

5.3 Advice for firefighters

Special protective equipment for firefighters : Self-contained breathing apparatus

Further information : Wear suitable protective equipment.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Wear suitable protective equipment.

6.2 Environmental precautions

Environmental precautions : The product should not be allowed to enter drains, water courses or the soil.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Treat recovered material as described in the section "Disposal considerations".

6.4 Reference to other sections

Information regarding Safe handling, see chapter 7.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : not required under normal use

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Take off immediately all contaminated clothing and wash it before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Further information on : Keep containers tightly closed in a cool, well-ventilated place.

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storage conditions

Handle and open container with care. Keep away from flames and sparks.

7.3 Specific end use(s)

Specific use(s) : No further recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Propylene Glycol CAS-No.: 57-55-6	Workers	Inhalation	Long-term systemic effects	168 mg/m3
	Remarks:DNEL			
	Workers	Inhalation	Long-term local effects	10 mg/m3
	Remarks:DNEL			
	Consumers	Inhalation	Long-term systemic effects	50 mg/m3
	Consumers	Inhalation	Long-term local effects	10 mg/m3
1,2-Benzisothiazol-3(2H)-one CAS-No.: 2634-33-5	Workers	Inhalation	Long-term systemic effects	6,81 mg/m3
	Remarks:DNEL			
	Workers	Dermal	Long-term systemic effects	0,966 mg/kg bw/day
	Remarks:DNEL			
	Consumers	Inhalation	Long-term systemic effects	1,2 mg/m3
	Consumers	Dermal	Long-term systemic effects	0,345 mg/kg bw/day
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) CAS-No.: 55965-84-9	Workers	Inhalation	Long-term local effects	0,02 mg/m3
	Remarks:DNEL			
	Workers	Inhalation	Acute local effects	0,04 mg/m3
	Remarks:DNEL			
	Consumers	Inhalation	Long-term local effects	0,02 mg/m3
	Consumers	Inhalation	Acute local effects	0,04 mg/m3

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Remarks:DNEL				
Consumers	Oral	Long-term systemic effects	0,09 mg/kg bw/day	
Remarks:DNEL				
Consumers	Oral	Acute systemic effects	0,11 mg/kg bw/day	
Remarks:DNEL				

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

Substance name	Environmental Compartment	Value
Propylene Glycol CAS-No.: 57-55-6	Fresh water	260 mg/l
	Marine water	26 mg/l
	Intermittent use/release	183 mg/l
	Sewage treatment plant	20000 mg/l
	Fresh water sediment	572 mg/kg dry weight (d.w.)
	Marine sediment	57,2 mg/kg dry weight (d.w.)
1,2-Benzisothiazol-3(2H)-one CAS-No.: 2634-33-5	Fresh water	0,00403 mg/l
	Marine water	0,000403 mg/l
	Intermittent use/release	0,0011 mg/l
	Sewage treatment plant	1,03 mg/l
	Fresh water sediment	0,0499 mg/kg dry weight (d.w.)
	Marine sediment	0,00499 mg/kg dry weight (d.w.)
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) CAS-No.: 55965-84-9	Fresh water	3,39 µg/l
	Marine water	3,39 µg/l
	Sewage treatment plant	0,23 mg/l
	Soil	0,01 mg/kg dry weight (d.w.)
	Intermittent use/release	3,39 µg/l
	Fresh water sediment	0,027 mg/kg dry weight (d.w.)
	Marine sediment	0,027 mg/kg dry weight (d.w.)

8.2 Exposure controls

Engineering measures

Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

Eye/face protection : Safety glasses

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Hand protection Remarks	:	Nitrile rubber Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Skin and body protection	:	Wear suitable protective equipment.
Respiratory protection	:	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Protective measures	:	Wear suitable protective equipment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	yellow
Odour	:	not significant
Odour Threshold	:	not determined
Freezing point	:	no data available
Boiling point	:	> 100 °C
Flammability	:	Not applicable
Upper explosion limit / upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined
Flash point	:	ca. 100 °C
Auto-ignition temperature	:	not determined
Decomposition temperature	:	The product does not contain any chemical groups which suggest self-reactive properties, nor is the estimated SADT less than 75 °C, nor is the exothermic decomposition energy higher than 300 J/g.
pH	:	7,1 (20 °C) Concentration: 100 % (undiluted)
Viscosity Viscosity, dynamic	:	480 mPa.s (23 °C) Method: DIN 53019

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Viscosity, kinematic	:	no data available
Solubility(ies)		
Water solubility	:	dispersion
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	not determined
Vapour pressure	:	not determined
Relative density	:	no data available
Density	:	1,1 g/cm ³ (20 °C) Method: DIN EN ISO 2811
Relative vapour density	:	not determined
Particle characteristics Assessment	:	Assessment: This substance/ mixture contains nanoforms
Particle size	:	Further particle properties for nanomaterials see section 3

9.2 Other information

Explosives	:	no data available
Oxidizing properties	:	no data available
Flammable solids Burning number	:	Not applicable
Metal corrosion rate	:	no data available
Evaporation rate	:	not determined
Minimum ignition energy	:	not determined
Molecular weight	:	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal

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use.Stable

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : no data available

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

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

Acute toxicity

Product:

Acute oral toxicity : Remarks: no data available

Acute inhalation toxicity : Remarks: no data available

Acute dermal toxicity : Remarks: no data available

Components:

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

Acute oral toxicity : LD50 (Rat, male and female): 670 - 784 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute toxicity estimate: Method: Calculation method

Acute inhalation toxicity : LC50 (Rat, male and female): 0,5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OPPTS 870.1300
GLP: yes

Acute toxicity estimate: Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Acute oral toxicity : LD50 (Rat): 64 mg/kg

Acute toxicity estimate: Method: Calculation method

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Acute inhalation toxicity : LC50 (Rat, male and female): 0,171 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Assessment: Corrosive to the respiratory tract.

Acute toxicity estimate: Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : LD50 (Rabbit): 92,4 mg/kg

Acute toxicity estimate: Method: Calculation method

Skin corrosion/irritation

Product:

Remarks : no data available

Components:

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

Species : Rabbit
Exposure time : 4 h
Method : Other
Result : Irritating to skin.
GLP : yes

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Species : Rabbit
Method : OECD Test Guideline 404
Result : Corrosive after 1 to 4 hours of exposure
GLP : no

Serious eye damage/eye irritation

Product:

Remarks : no data available

Components:

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

Species : Rabbit
Exposure time : 2,9 h - 11 d
Result : Risk of serious damage to eyes.
GLP : yes

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Species : Rabbit

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Method : Other
Result : Risk of serious damage to eyes.
GLP : no

Respiratory or skin sensitisation

Product:

Remarks : no data available

Components:

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

Test Type : Guinea pig maximization test
Exposure routes : Dermal
Species : Guinea pig
Method : Other
Result : May cause sensitisation by skin contact.
GLP : yes

Assessment : Harmful if swallowed., Fatal if inhaled., Causes skin irritation.,
Causes serious eye damage.
May cause an allergic skin reaction.

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : The product is a skin sensitiser, sub-category 1A.
GLP : yes

Assessment : Toxic if swallowed., Fatal in contact with skin., Fatal if
inhaled., Causes severe skin burns and eye damage.
May cause an allergic skin reaction.

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: no data available

Germ cell mutagenicity-
Assessment : No information available.

Components:

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

Genotoxicity in vitro : Test Type: Mouse lymphoma assay
Test system: mouse lymphoma cells
Concentration: 0,1 - 12,8 µg/ml
Metabolic activation: with and without metabolic activation

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Method: OECD Test Guideline 476

Result: negative

GLP: yes

Test Type: Ames test

Test system: Salmonella typhimurium

Concentration: 0,064 - 200 µg/plate

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

GLP: yes

Test Type: Chromosome aberration test in vitro

Test system: Human lymphocytes

Concentration: 1 - 40 µg/ml

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: positive

GLP: yes

Genotoxicity in vivo

: Test Type: Other

Species: Rat (male)

Strain: wistar

Cell type: Liver cells

Application Route: Ingestion

Exposure time: single dose

Dose: 560 - 1400 mg/kg

Method: OECD Test Guideline 486

Result: negative

GLP: yes

Test Type: Micronucleus test

Species: Mouse (male and female)

Strain: CD1

Cell type: Bone marrow

Application Route: Ingestion

Exposure time: single dose

Dose: 125-250-500-1000-2000-5000mg/k

Method: OECD Test Guideline 474

Result: negative

GLP: yes

Germ cell mutagenicity-
Assessment

: Weight of evidence does not support classification as a germ cell mutagen.

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Genotoxicity in vitro

: Test Type: In vitro study

Metabolic activation: with and without metabolic activation

Result: Conflicting results have been seen in different studies.

Genotoxicity in vivo

: Test Type: Micronucleus test

Species: Rat

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Cell type: Bone marrow
Application Route: Oral
Exposure time: <= 5 d
Dose: 1-5 x <= 28 mg/kg
Result: negative

Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Exposure time: <= 5 d
Dose: 1-5 x <= 20 - 30 mg/kg
Result: negative

Germ cell mutagenicity-
Assessment : In vivo tests did not show mutagenic effects

Carcinogenicity

Product:

Carcinogenicity -
Assessment : No information available.

Components:

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

Carcinogenicity -
Assessment : No information available.

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Carcinogenicity -
Assessment : No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Product:

Reproductive toxicity -
Assessment : No information available.

Components:

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

Effects on fertility : Species: Rat, male
Application Route: oral (feed)
Dose: 18,5 - 97,8 mg/kg
General Toxicity - Parent: NOAEL: 18,5 mg/kg body weight
General Toxicity F1: NOAEL: 48 mg/kg body weight
Method: Other
GLP: yes

Species: Rat, female
Application Route: oral (feed)

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Dose: 27,0 - 114,8 mg/kg
General Toxicity - Parent: NOAEL: 27 mg/kg body weight
General Toxicity F1: NOAEL: 56,6 mg/kg body weight
Method: Other
GLP: yes

Effects on foetal development : Species: Rat, female
Application Route: oral (gavage)
Dose: 10 - 40 - 100 mg/kg
General Toxicity Maternal: NOAEL: 10 mg/kg body weight
Teratogenicity: NOAEL: 40 mg/kg body weight
Method: Directive 67/548/EEC, Annex V, B.31.
GLP: yes

Reproductive toxicity - Assessment : No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Effects on fertility : Species: Rat, male and female
Application Route: Drinking water
Dose: 25 - 75 - 225 ppm
General Toxicity - Parent: NOAEL: 16,3 - 24,7 mg/kg body weight
General Toxicity F1: NOAEL: 16,3 - 24,7 mg/kg body weight
Method: Other
GLP: yes

Species: Rat, male and female
Application Route: Drinking water
Dose: 30 - 100 - 300 ppm
General Toxicity - Parent: NOAEL: 2,8 - 4,4 mg/kg body weight
General Toxicity F1: NOAEL: 22,7 - 28 mg/kg body weight
General Toxicity F2: NOAEL: 35,7 - 39,1 mg/kg body weight
Method: OECD Test Guideline 416
GLP: yes

Effects on foetal development : Species: Rat, male and female
Application Route: oral (gavage)
Dose: <= 15 mg/kg
Developmental Toxicity: NOAEL: 15 mg/kg body weight
Method: Other

Species: Rat, male and female
Application Route: oral (gavage)
General Toxicity Maternal: NOAEL: <= 3,95 mg/kg body weight
Method: Other

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity
Embryotoxicity classification not possible from current data.

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STOT - single exposure

Product:

Remarks : no data available

Components:

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

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

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

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

STOT - repeated exposure

Product:

Remarks : no data available

Components:

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

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

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

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

Repeated dose toxicity

Product:

Remarks : This information is not available.

Components:

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

Species : Dog, male and female
NOAEL : 5 mg/kg
LOAEL : 20 mg/kg
Application Route : oral (gavage)
Exposure time : 90 d
Number of exposures : daily
Dose : 5 - 20 - 50 mg/kg
Control Group : yes
Method : 88/302/EC
GLP : yes

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reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Species : Rat, male and female
NOAEL : 16,3 - 24,7 mg/kg
Application Route : Drinking water
Exposure time : 90 d
Number of exposures : daily
Dose : 25 - 75 - 225 ppm
Control Group : yes
Method : Other
GLP : yes

Aspiration toxicity

Product:

no data available

Components:

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

No aspiration toxicity classification

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

No aspiration toxicity classification

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : 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.

Further information

Product:

Remarks : no data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: no data available

Toxicity to daphnia and other : Remarks: no data available

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aquatic invertebrates

Toxicity to algae/aquatic plants : Remarks: no data available

Toxicity to fish (Chronic toxicity) : Remarks: no data available

Toxicity to microorganisms : Remarks: no data available

Components:

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

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): 16,7 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: Other
GLP: yes

LC50 (Oncorhynchus mykiss (rainbow trout)): 2,18 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,94 mg/l
End point: mortality
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes

EC0 (Daphnia magna (Water flea)): 0,643 mg/l
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes

EC50 (Mysidopsis bahia (opossum shrimp)): 0,9893 mg/l
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: Other
GLP: yes
Remarks: salt water

NOEC (Mysidopsis bahia (opossum shrimp)): 0,25 mg/l

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Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: Other
GLP: yes
Remarks: salt water

Toxicity to algae/aquatic plants : ErC50 (Selenastrum capricornutum (green algae)): 0,110 mg/l
Exposure time: 72 h
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

NOEC (Pseudokirchneriella subcapitata (green algae)):
0,0403 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : EC50 (activated sludge): 23 mg/l
End point: Bacteria toxicity (respiration inhibition)
Exposure time: 3 h
Test Type: aquatic
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

EC50 : > 811,5 mg/kg Trockengewicht mg/kg dry weight (d.w.)
Exposure time: 28 d
Test Type: Soil
Analytical monitoring: yes
Method: OECD 216
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

NOEC : 263,7 mg/kg Trockengewicht mg/kg dry weight (d.w.)
Exposure time: 28 d
Test Type: Soil
Analytical monitoring: yes
Method: OECD 216
GLP: yes
Remarks: The details of the toxic effect relate to the nominal concentration.

Toxicity to fish (Chronic toxicity) : NOEC: 0,21 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)
Analytical monitoring: yes

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Method: OECD Test Guideline 215

GLP: yes

Toxicity to daphnia and other
aquatic invertebrates
(Chronic toxicity)

NOEC: 1,2 mg/l

End point: Reproduction rate

Exposure time: 21 d

Species: Daphnia magna (Water flea)

Analytical monitoring: yes

Method: OECD Test Guideline 211

GLP: yes

NOEC: 1,9 mg/l

End point: Reproduction rate

Exposure time: 21 d

Species: Daphnia magna (Water flea)

Analytical monitoring: yes

Method: OECD Test Guideline 211

GLP: yes

Toxicity to soil dwelling
organisms

: Test Type: artificial soil

LC50: > 410,6 mg/kg

Exposure time: 14 d

End point: mortality

Species: Eisenia fetida (earthworms)

Method: OECD Test Guideline 207

GLP:yes

Remarks: The details of the toxic effect relate to the nominal concentration.

Test Type: artificial soil

NOEC: 234,5 mg/kg

Exposure time: 14 d

End point: mortality

Species: Eisenia fetida (earthworms)

Method: OECD Test Guideline 207

GLP:yes

Remarks: The details of the toxic effect relate to the nominal concentration.

Plant toxicity

: EC50: 340 mg/kg

Exposure time: 20 d

End point: Growth

Species: Phaseolus vulgaris

Analytical monitoring: yes

Method: OECD Guide-line 208

GLP:yes

Remarks: The details of the toxic effect relate to the nominal concentration.

NOEC: 90 mg/kg

Exposure time: 20 d

End point: Growth

Species: Phaseolus vulgaris

Analytical monitoring: yes

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Method: OECD Guide-line 208

GLP:yes

Remarks: The details of the toxic effect relate to the nominal concentration.

EC50: 300 mg/kg

Exposure time: 19 d

End point: Growth

Species: Triticum aestivm (wheat)

Analytical monitoring: yes

Method: OECD Guide-line 208

GLP:yes

Remarks: The details of the toxic effect relate to the nominal concentration.

NOEC: 51 mg/kg

Exposure time: 19 d

End point: Growth

Species: Triticum aestivm (wheat)

Analytical monitoring: yes

Method: OECD Guide-line 208

GLP:yes

Remarks: The details of the toxic effect relate to the nominal concentration.

Sediment toxicity : Remarks: not available

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Toxicity to fish : EC50 (Oncorhynchus mykiss (rainbow trout)): 0,22 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,1 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Skeletonema costatum (marine diatom)): 0,0052 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 201

NOEC (Skeletonema costatum (marine diatom)): 0,00049 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 201

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M-Factor (Acute aquatic toxicity)	:	100
Toxicity to microorganisms	:	EC50 (activated sludge): 7,92 mg/l Exposure time: 3 h Method: OECD Test Guideline 209
Toxicity to fish (Chronic toxicity)	:	NOEC: 0,098 mg/l Exposure time: 28 d Species: Oncorhynchus mykiss (rainbow trout) Method: OECD Test Guideline 215
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0,004 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 202
M-Factor (Chronic aquatic toxicity)	:	100
Toxicity to soil dwelling organisms	:	LC50: 86,6 mg/kg dry weight (d.w.) Exposure time: 14 d Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207 NOEC: 8,83 mg/kg dry weight (d.w.) Exposure time: 14 d Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207

Ecotoxicology Assessment

Acute aquatic toxicity	:	Very toxic to aquatic life.
Chronic aquatic toxicity	:	Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: Not applicable

Components:

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

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Concentration: 1 mg/l
Result: Partially biodegradable.
Exposure time: 63 d
Method: OECD Test Guideline 301C
GLP: yes

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- Physico-chemical removability : Remarks: Biodegradable
- Stability in water : Test Type: abiotic
Degradation half life: 219 d
pH: 4
Hydrolysis: at 50 °C
Method: OECD Test Guideline 111
GLP: yes
- Test Type: abiotic
Degradation half life: > 200 d
pH: 7
Hydrolysis: at 50 °C
Method: OECD Test Guideline 111
GLP: yes
- Test Type: abiotic
Degradation half life: 145 d
pH: 9
Hydrolysis: at 50 °C
Method: OECD Test Guideline 111
GLP: yes
- Photodegradation : Test Type: water
Light source: Xenon lamp
Light spectrum: 290 - 400 nm
Degradation (direct photolysis): < 1,5 %
GLP: yes
- Test Type: air
Method: calculated
GLP: no
Remarks: Decomposes rapidly in contact with light.

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

- Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Result: Not rapidly biodegradable
Method: OECD Test Guideline 301B
- Photodegradation : Test Type: water
Light source: Sunlight

12.3 Bioaccumulative potential

Product:

- Bioaccumulation : Remarks: no data available

Components:

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

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Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Exposure time: 56 d
Concentration: 0,1 mg/l
Bioconcentration factor (BCF): 6,62
Method: OECD Test Guideline 305
GLP: no
Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

Partition coefficient: n-octanol/water : log Pow: 0,7 (20 °C)
pH: 7
Method: Regulation (EC) No. 440/2008, Annex, A.8
GLP: yes

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Bioaccumulation : Bioconcentration factor (BCF): 3,6
Method: calculated
Remarks: Does not accumulate in organisms.

Partition coefficient: n-octanol/water : log Pow: -0,71 - 0,75
Method: OECD Test Guideline 107
GLP: yes

12.4 Mobility in soil

Components:

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

Distribution among environmental compartments : Adsorption/Soil
Medium: water - soil
Koc: 235 - 566
Method: Other

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.

Components:

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

Assessment : The substance is not identified as a PBT or as a vPvB substance.

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

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12.6 Endocrine disrupting properties

Product:

Assessment : 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.

12.7 Other adverse effects

Product:

Environmental fate and pathways : no data available

Additional ecological information : no data available

Components:

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

Environmental fate and pathways : not available

Additional ecological information : Do not allow to enter ground water, waterways or waste water.

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Additional ecological information : The product should not be allowed to enter drains, water courses or the soil.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with the European Directives on waste and hazardous waste.

Contaminated packaging : This material and its container must be disposed of in a safe way.

SECTION 14: Transport information

Section 14.1. to 14.5.

ADR not restricted
ADN not restricted
RID not restricted
IATA not restricted

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IMDG not restricted

14.6. Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7. Maritime transport in bulk according to IMO instruments

No transport as bulk according IBC - Code.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	: Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	: Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	: Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	: Not applicable
Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors	: Neither banned nor restricted
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	: Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	: Not applicable

Other regulations:

Apart from the data/regulations specified in this chapter, no further information is available concerning safety, health and environmental protection.

15.2 Chemical safety assessment

No Chemical Safety Assessment (CSA) is yet available for the substance, or for the component substances, contained in this product.

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SECTION 16: Other information

Full text of H-Statements

H301	: Toxic if swallowed.
H302	: Harmful if swallowed.
H310	: Fatal 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.
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.
EUH071	: Corrosive to the respiratory tract.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Dam.	: Serious eye damage
Skin Corr.	: Skin corrosion
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation

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-

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Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Heubach makes no warranties, express or implied, as to the information's accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of Heubach's products for its particular application. Nothing included in this information waives any of Heubach's General Terms and Conditions of Sale, which control unless it agrees otherwise in writing. Any existing intellectual/industrial property rights must be observed. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing Heubach products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet information before handling any of these products. For additional information, please contact Heubach.

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