

# SAFETY DATA SHEET



Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2020/878

## AC38

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

#### 1.1. Product identifier

**Product name** : AC38  
**Registration number REACH** : Not applicable (mixture)  
**Product type REACH** : Mixture

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

##### 1.2.1 Relevant identified uses

Treated article according to Regulation (EU) No 528/2012  
Adhesive  
Sealant

##### 1.2.2 Uses advised against

Do not use for the manufacture of toys and childcare articles

#### 1.3. Details of the supplier of the safety data sheet

##### Supplier of the safety data sheet

Novatio\*  
Industrielaan 5B  
B-2250 Olen  
☎ +32 14 25 76 40  
☎ +32 14 22 02 66  
info@novatio.be  
\*NOVATIO is a registered trademark of Novatech International N.V.

##### Manufacturer of the product

Novatech International N.V.  
Industrielaan 5B  
B-2250 Olen  
☎ +32 14 85 97 37  
☎ +32 14 85 97 38  
info@novatech.be

#### 1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch) :  
+32 14 58 45 45 (BIG)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

#### 2.2. Label elements

Not classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

##### Supplemental information

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.
EUH210	Safety data sheet available on request.
EUH212	Warning! Hazardous respirable dust may be formed when used. Do not breathe dust. Contains biocides

#### 2.3. Other hazards

No other hazards known

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

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## 3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark	M-factors and ATE
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm] 01-2119489379-17	13463-67-7 236-675-5	1%<C<2.5%	Carc. 2; H351	(1)(2)	Constituent	
1,2-benzisothiazol-3(2H)-one 01-2120761540-60	2634-33-5 220-120-9	0.0025% <C<0.01%	Skin Sens. 1; H317 Acute Tox. 4; H302 Eye Dam. 1; H318 Skin Irrit. 2; H315 Aquatic Acute 1; H400 Skin Sens. 1; H317: C≥0,05%, (CLP Annex VI (ATP 0))	(1)(10)	Constituent	M: 1 (Acute, BIG)
reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) 01-2120764691-48	55965-84-9	C<0.0015%	Acute Tox. 2; H330 Acute Tox. 2; H310 Acute Tox. 3; H301 Skin Sens. 1A; H317 Skin Corr. 1C; H314 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 EUH071 Skin Irrit. 2; H315: 0,06% ≤C<0.6%, (CLP Annex VI (ATP 0)) Eye Dam. 1; H318: C≥0,6%, (CLP Annex VI (ATP 13)) Skin Corr. 1B; H314: C≥0,6%, (CLP Annex VI (ATP 0)) Eye Irrit. 2; H319: 0,06% ≤C<0,6%, (CLP Annex VI (ATP 0)) Skin Sens. 1; H317: C≥0,0015%, (CLP Annex VI (ATP 0))	(1)(2)(10)	Constituent	M: 100 (Acute, CLP Annex VI (ATP 13)) M: 100 (Chronic, CLP Annex VI (ATP 13))

- (1) For H- and EUH-statements in full: see section 16  
 (2) Substance with a Community workplace exposure limit  
 (10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General:

Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms.

#### After inhalation:

Remove victim into fresh air. In case of respiratory problems, consult a doctor/medical service.

#### After skin contact:

If possible, wipe up/dry remove chemical. Then rinse/shower immediately with (lukewarm) water. If irritation persists, consult a doctor/medical service.

#### After eye contact:

Rinse immediately with (lukewarm) water. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, consult a doctor/medical service.

#### After ingestion:

Rinse mouth with water. If you feel unwell, consult a doctor/medical service. Do not wait for symptoms to occur to consult Poison Center.

### 4.2. Most important symptoms and effects, both acute and delayed

#### 4.2.1 Acute symptoms

##### After inhalation:

No effects known.

##### After skin contact:

No effects known.

##### After eye contact:

No effects known.

##### After ingestion:

No effects known.

#### 4.2.2 Delayed symptoms

No effects known.

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## 4.3. Indication of any immediate medical attention and special treatment needed

If applicable and available it will be listed below.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### 5.1.1 Suitable extinguishing media:

Small fire: Quick-acting ABC powder extinguisher, Class A foam extinguisher, Water (quick-acting extinguisher, reel).

Major fire: Water, Class A foam.

#### 5.1.2 Unsuitable extinguishing media:

Small fire: Quick-acting BC powder extinguisher, Quick-acting CO2 extinguisher.

### 5.2. Special hazards arising from the substance or mixture

In case of fire: possible release of toxic/corrosive gases/vapours.

### 5.3. Advice for firefighters

#### 5.3.1 Instructions:

No specific fire-fighting instructions required.

#### 5.3.2 Special protective equipment for fire-fighters:

Gloves (EN 374). Protective clothing (EN 14605 or EN 13034). Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

No naked flames.

#### 6.1.1 Protective equipment for non-emergency personnel

See section 8.2

#### 6.1.2 Protective equipment for emergency responders

Gloves (EN 374). Protective clothing (EN 14605 or EN 13034).

Suitable protective clothing

See section 8.2

### 6.2. Environmental precautions

Contain released product.

### 6.3. Methods and material for containment and cleaning up

Solid spill: cover with absorbent material. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water.

Wash clothing and equipment after handling.

### 6.4. Reference to other sections

See section 13.

## SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 7.1. Precautions for safe handling

Keep away from naked flames/heat. Observe strict hygiene. Remove contaminated clothing immediately. Keep container tightly closed.

### 7.2. Conditions for safe storage, including any incompatibilities

#### 7.2.1 Safe storage requirements:

Meet the legal requirements. Protect against frost.

#### 7.2.2 Keep away from:

Heat sources.

#### 7.2.3 Suitable packaging material:

No data available

#### 7.2.4 Non suitable packaging material:

No data available

### 7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 Occupational exposure

##### a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

#### Belgium

Titane (dioxide de)	Time-weighted average exposure limit 8 h	10 mg/m <sup>3</sup>
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## France

Titane (dioxyde de), en Ti	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	10 mg/m <sup>3</sup>
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## Austria

5-Chlor-2-methyl-2,3- dihydroisothiazol-3-on und 2-Methyl-2,3-di-hydroisothiazol- 3-on (Gemisch im Verhältnis 3:1)	Tagesmittelwert (MAK)	0.05 mg/m <sup>3</sup>
Titandioxid (Alveolarstaub)	Tagesmittelwert (MAK)	5 mg/m <sup>3</sup>
	Kurzzeitwert 60(Miw) 2x (MAK)	10 mg/m <sup>3</sup>

## UK

Titanium dioxide respirable	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	4 mg/m <sup>3</sup>
Titanium dioxide total inhalable	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	10 mg/m <sup>3</sup>

## USA (TLV-ACGIH)

Titanium dioxide - finescale particles	Time-weighted average exposure limit 8 h (TLV - Intended Changes)	2.5 mg/m <sup>3</sup> (R)
Titanium dioxide - nanoscale particles	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	0.2 mg/m <sup>3</sup> (R)

(R): Respirable fraction

### b) National biological limit values

If limit values are applicable and available these will be listed below.

#### 8.1.2 Sampling methods

Product name	Test	Number
TiO <sub>2</sub>	NIOSH	7302
TiO <sub>2</sub>	NIOSH	7304

#### 8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

#### 8.1.4 Threshold values

##### DNEL/DMEL - Workers

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	1.25 mg/m <sup>3</sup>	

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

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	6.81 mg/m <sup>3</sup>	
	Long-term systemic effects dermal	0.966 mg/kg bw/day	

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

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	0.02 mg/m <sup>3</sup>	
	Acute local effects inhalation	0.04 mg/m <sup>3</sup>	

##### DNEL/DMEL - General population

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	210 µg/m <sup>3</sup>	

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

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	1.2 mg/m <sup>3</sup>	
	Long-term systemic effects dermal	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)

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	0.02 mg/m <sup>3</sup>	
	Acute local effects inhalation	0.04 mg/m <sup>3</sup>	
	Long-term systemic effects oral	0.09 mg/kg bw/day	
	Acute systemic effects oral	0.11 mg/kg bw/day	

## PNEC

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

Compartments	Value	Remark
Fresh water	4.03 µg/l	
Fresh water (intermittent releases)	1.1 µg/l	
Marine water	0.403 µg/l	
Marine water (intermittent releases)	110 ng/l	
STP	1.03 mg/l	
Fresh water sediment	49.9 µg/kg sediment dw	
Marine water sediment	4.99 µg/kg sediment dw	
Soil	3 mg/kg soil dw	

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

Compartments	Value	Remark
Fresh water	3.39 µg/l	
Fresh water (intermittent releases)	3.39 µg/l	
Marine water	3.39 µg/l	
Marine water (intermittent releases)	3.39 µg/l	
STP	0.23 mg/l	
Fresh water sediment	0.027 mg/kg sediment dw	
Marine water sediment	0.027 mg/kg sediment dw	
Soil	0.01 mg/kg soil dw	

## 8.1.5 Control banding

If applicable and available it will be listed below.

## 8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

### 8.2.2 Individual protection measures, such as personal protective equipment

Observe strict hygiene. Do not eat, drink or smoke during work.

#### a) Respiratory protection:

Respiratory protection not required in normal conditions. Dust production: dust mask with filter type P3.

#### b) Hand protection:

Protective gloves against chemicals (EN 374).

#### c) Eye protection:

Safety glasses (EN 166).

#### d) Skin protection:

Protective clothing (EN 14605 or EN 13034).

### 8.2.3 Environmental exposure controls:

See sections 6.2, 6.3 and 13

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical form	Paste
Odour	Characteristic odour
Odour threshold	No data available in the literature
Colour	White
Particle size	Not applicable (mixture)
Explosion limits	No data available in the literature
Flammability	Not classified as flammable
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available in the literature
Kinematic viscosity	> 21 mm²/s
Melting point	0 °C
Boiling point	100 °C
Relative vapour density	No data available in the literature
Vapour pressure	No data available in the literature
Solubility	Water ; soluble
Relative density	1.61 ; 20 °C
Absolute density	1610 kg/m³ ; 20 °C
Decomposition temperature	No data available in the literature
Auto-ignition temperature	No data available in the literature
Flash point	No data available in the literature
pH	7 - 9 ; 20 °C

### 9.2. Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Heating increases the fire hazard.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No data available.

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## 10.4. Conditions to avoid

### Precautionary measures

Keep away from naked flames/heat.

## 10.5. Incompatible materials

No data available.

## 10.6. Hazardous decomposition products

No data available.

## SECTION 11: Toxicological information

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

#### 11.1.1 Test results

#### Acute toxicity

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No (test)data on the mixture available

Judgement is based on the relevant ingredients

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 401	> 2000 mg/kg bw		Rat (male / female)	Experimental value	
Dermal						Data waiving	
Inhalation (dust)	LC50	OECD 403	> 5.09 mg/l	4 h	Rat (male)	Experimental value	

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

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	490 mg/kg bw		Rat (male / female)	Experimental value	
Dermal	LD50	OECD 402	> 2000 mg/kg bw	24 h	Rat (male / female)	Experimental value	
Inhalation						Data waiving	

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

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 401	66 mg/kg bw		Rat (male / female)	Experimental value	Calculated by reference to active substance
Dermal	LD50	OECD 402	> 141 mg/kg bw	24 h	Rat (male / female)	Experimental value	
Inhalation (dust)	LC50	OECD 403	0.17 mg/l air	4 h	Rat (male / female)	Experimental value	Calculated by reference to active substance

#### Conclusion

Not classified for acute toxicity

#### Corrosion/irritation

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No (test)data on the mixture available

Judgement is based on the relevant ingredients

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	OECD 405		1; 24; 48; 72 hours	Rabbit	Experimental value	
Skin	Not irritating	Equivalent to OECD 404	4 h	48 hours	Rabbit	Experimental value	

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

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Serious eye damage	EPA OPP 81-4		24; 48; 72 hours	Rabbit	Experimental value	
Skin	Slightly irritating	EPA OPP 81-5	4 h	24; 48; 72 hours	Rabbit	Experimental value	
Skin	Irritating; category 2					Annex VI	

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

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Serious eye damage			1; 24; 48; 72 hrs; 7; 14 days	Rabbit	Experimental value	Single treatment with rinsing
Skin	Corrosive	OECD 404	4 h		Rabbit	Experimental value	Aqueous solution

## Conclusion

Not classified as irritating to the skin  
Not classified as irritating to the eyes  
Not classified as irritating to the respiratory system

## Respiratory or skin sensitisation

### AC38

No (test)data on the mixture available

Judgement is based on the relevant ingredients

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 429			Mouse (female)	Experimental value	
Inhalation (dust)	Not sensitizing				Mouse (female)	Experimental value	

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

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing	EPA OPP 81-6			Guinea pig (female)	Experimental value	

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

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing	OECD 406			Guinea pig (male / female)	Experimental value	

## Conclusion

Not classified as sensitizing for skin  
Not classified as sensitizing for inhalation

## Specific target organ toxicity

### AC38

No (test)data on the mixture available

Judgement is based on the relevant ingredients

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (stomach tube)	NOAEL	OECD 408	> 1000 mg/kg bw/day		No effect	90 day(s)	Rat (male / female)	Experimental value
Dermal								Data waiving
Inhalation (aerosol)	NOAEC	Subchronic toxicity test	2.1 mg/m <sup>3</sup> air		No effect	13 weeks (6h / day, 5 days / week)	Rat (female)	Experimental value

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

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (diet)	NOAEL	EPA OPP 82-1	69 mg/kg bw/day		No effect	90 day(s)	Rat (male / female)	Experimental value
Dermal								Data waiving
Inhalation								Data waiving

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

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral (diet)	NOAEL systemic effects	OECD 409	22 mg/kg bw/day		No adverse systemic effects	13 weeks (7 days / week)	Dog (male / female)	Experimental value
Dermal	NOAEL systemic effects	EPA OPP 82-3	2.625 mg/kg bw/day		No adverse systemic effects	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value
Dermal	NOAEC local effects	EPA OPP 82-3	0.105 mg/kg bw/day	Skin	No effect	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value
Inhalation (aerosol)	NOAEL	OECD 413	0.34 mg/m <sup>3</sup> air		No effect	13 weeks (6h / day, 5 days / week)	Rat (male / female)	Experimental value

## Conclusion

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Not classified for subchronic toxicity

## Mutagenicity (in vitro)

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No (test)data on the mixture available

Judgement is based on the relevant ingredients

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 473	Chinese hamster ovary (CHO)		Experimental value	
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)		Experimental value	

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

Result	Method	Test substrate	Effect	Value determination	Remark
Negative with metabolic activation, negative without metabolic activation	OECD 476	Mouse (lymphoma L5178Y cells)		Experimental value	
Positive with metabolic activation, positive without metabolic activation	OECD 473	Human lymphocytes		Experimental value	
Negative with metabolic activation, negative without metabolic activation	OECD 471	Bacteria (S.typhimurium)		Experimental value	

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

Result	Method	Test substrate	Effect	Value determination	Remark
Positive with metabolic activation, positive without metabolic activation	EPA OPP 84-2	Bacteria (S. typhimurium and E. coli)		Experimental value	Aqueous solution
Positive with metabolic activation, positive without metabolic activation	OECD 476	Mouse (lymphoma L5178Y cells)		Experimental value	Aqueous solution

## Mutagenicity (in vivo)

### AC38

No (test)data on the mixture available

Judgement is based on the relevant ingredients

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Oral (stomach tube))	OECD 474		Mouse (male / female)		Experimental value

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

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Oral (stomach tube))	OECD 486		Rat (male)		Experimental value

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

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative (Oral (stomach tube))	EPA OPP 84-2	2 dose(s)/24-hour interval	Mouse (male / female)		Experimental value

## Conclusion

Not classified for mutagenic or genotoxic toxicity

## Carcinogenicity

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No (test)data on the mixture available

Judgement is based on the relevant ingredients

The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ .



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titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (aerosol)		Equivalent to OECD 453		105 weeks (6h / day, 5 days / week)	Rat (male)	Lung tissue affection/degeneration	Lungs	Experimental value
Inhalation (aerosol)	NOAEC	Equivalent to OECD 453	5 mg/m³ air	104 weeks (6h / day, 5 days / week)	Rat (male / female)	No carcinogenic effect	Lungs	Experimental value
Oral (diet)	NOEL	Carcinogenic toxicity study	2500 mg/kg bw/day	103 weeks (7 days / week)	Rat (male / female)	No carcinogenic effect		Experimental value

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

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral (drinking water)	NOEL	OECD 453	300 ppm	24 month(s)	Rat (male / female)	No carcinogenic effect		Experimental value

## Conclusion

Not classified for carcinogenicity

## Reproductive toxicity

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No (test)data on the mixture available

Judgement is based on the relevant ingredients

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	OECD 414	1000 mg/kg bw/day	2 weeks (7 days / week)	Rat	No effect		Experimental value
Maternal toxicity (Oral (stomach tube))	NOAEL	OECD 414	1000 mg/kg bw/day	2 weeks (7 days / week)	Rat	No effect		Experimental value
Effects on fertility (Oral (diet))	NOAEL	OECD 443	≥ 1000 mg/kg bw/day	14 day(s)	Rat (male / female)	No effect		Experimental value

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

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Effects on fertility (Oral (diet))	NOAEL	EPA OPPTS 870.3800	112 mg/kg bw/day	18 week(s)	Rat (male)	No effect	sperm parameters or estrous cycle	Experimental value

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

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity (Oral (stomach tube))	NOAEL	EPA OPP 83-3	≥ 19.6 mg/kg bw/day	10 days (gestation, daily)	Rat	No effect		Experimental value
Maternal toxicity (Oral (stomach tube))	LOAEL	EPA OPP 83-3	28 mg/kg bw/day	10 days (gestation, daily)	Rat	Maternal toxicity		Experimental value
Effects on fertility (Oral (drinking water))	NOAEL	OECD 416	30 ppm	10 week(s)	Rat (male / female)	No effect		

## Conclusion

Not classified for reprotoxic or developmental toxicity

## Aspiration hazard

Judgement is based on the relevant ingredients

Not classified for aspiration toxicity

## Toxicity other effects

### AC38

No (test)data on the mixture available

## Chronic effects from short and long-term exposure

### AC38

Skin rash/inflammation.

## 11.2. Information on other hazards

No evidence of endocrine disrupting properties

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# AC38

## SECTION 12: Ecological information

### 12.1. Toxicity

#### AC38

No (test) data on the mixture available

Judgement of the mixture is based on the relevant ingredients

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		> 1000 mg/l		Pisces		Fresh water	Literature study
Acute toxicity crustacea	EC50		> 1000 mg/l		Invertebrata		Fresh water	Literature study
Toxicity algae and other aquatic plants	EC50	OECD 201	> 100 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
	NOEC	OECD 201	$\geq 100 \text{ mg/l}$	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Long-term toxicity fish	NOEC	Equivalent to OECD 212	$\geq 1000 \text{ mg/l}$	8 day(s)	Danio rerio	Semi-static system	Fresh water	Experimental value; Nominal concentration
Long-term toxicity aquatic crustacea	NOEC	OECD 211	$\geq 5 \text{ mg/l}$	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Weight of evidence; Reproduction
Toxicity aquatic micro-organisms	NOEC	OECD 209	$\geq 1000 \text{ mg/l}$	3 h	Activated sludge	Static system	Fresh water	Experimental value; Respiration

No classification for aquatic toxicity since the toxicity limits are above the water solubility

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

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	2.18 mg/l	96 h	Oncorhynchus mykiss	Static system		Experimental value; Nominal concentration
Acute toxicity crustacea	EC50	OECD 202	2.94 mg/l	48 h	Daphnia magna	Static system		Experimental value; Lethal
Toxicity algae and other aquatic plants	ErC50	OECD 201	150 $\mu\text{g/l}$	72 h	Pseudokirchneriella subcapitata			Experimental value; GLP
Toxicity aquatic micro-organisms	EC50	OECD 209	13 mg/l	3 h	Activated sludge			Experimental value; Respiration

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

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	EPA OPP 72-1	0.19 mg/l	96 h	Oncorhynchus mykiss	Flow-through system	Fresh water	Experimental value; GLP
Acute toxicity crustacea	EC50		0.007 mg/l	48 h	Acartia tonsa		Salt water	Experimental value; GLP
Toxicity algae and other aquatic plants	NOEC	OECD 201	0.49 $\mu\text{g/l}$	48 h	Skeletonema costatum	Static system	Salt water	Experimental value; Growth rate
	ErC50	OECD 201	19.9 $\mu\text{g/l}$	72 h	Skeletonema costatum	Static system	Salt water	Experimental value; GLP
Long-term toxicity fish	NOEC	OECD 210	46.4 $\mu\text{g/l}$	35 day(s)	Danio rerio	Flow-through system	Fresh water	Experimental value; GLP
Long-term toxicity aquatic crustacea	NOEC	EPA OPP 72-4	0.1 mg/l	21 day(s)	Daphnia magna	Flow-through system	Fresh water	Experimental value; Nominal concentration

#### Conclusion

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

### 12.2. Persistence and degradability

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

##### Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	7.568 h	1.5E6 /cm <sup>3</sup>	Calculated value

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

##### Biodegradation water

Method	Value	Duration	Value determination
OECD 301B	48 % - 56 %; GLP	28 day(s)	Experimental value

#### Conclusion

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## Water

Contains traces of a non-biodegradable component

### 12.3. Bioaccumulative potential

#### AC38

##### Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]

##### Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (inorganic)			

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

##### BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	Equivalent to OECD 305	6.62; Fresh weight	56 day(s)	Lepomis macrochirus	Experimental value

##### Log Kow

Method	Remark	Value	Temperature	Value determination
EU Method A.8		-0.9 - 0.99	20 °C	Experimental value

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

##### BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	OECD 305	41 - 54; Fresh weight	28 day(s)	Lepomis macrochirus	Experimental value

##### Log Kow

Method	Remark	Value	Temperature	Value determination
OECD 117		-0.32 - 0.7	20 °C	Experimental value

#### Conclusion

Does not contain bioaccumulative component(s)

### 12.4. Mobility in soil

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

##### (log) Koc

Parameter	Method	Value	Value determination
log Koc	OECD 121	0.97	Experimental value

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

##### (log) Koc

Parameter	Method	Value	Value determination
Koc	OECD 106	6.4 - 10	Experimental value
log Koc		0.81 - 1	Calculated value

#### Conclusion

Contains component(s) with potential for mobility in the soil

### 12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

### 12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties

### 12.7. Other adverse effects

#### AC38

##### Greenhouse gases

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

##### Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

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

##### Groundwater

Groundwater pollutant

## SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 13.1. Waste treatment methods

#### 13.1.1 Provisions relating to waste

European Union

# AC38

Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).

08 04 10 (wastes from MFSU of adhesives and sealants (including waterproofing products): waste adhesives and sealants other than those mentioned in 08 04 09). Depending on branch of industry and production process, also other waste codes may be applicable.

## 13.1.2 Disposal methods

Remove waste in accordance with local and/or national regulations. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

## 13.1.3 Packaging/Container

No data available

## SECTION 14: Transport information

### Road (ADR), Rail (RID), Inland waterways (ADN), Sea (IMDG/IMSBC), Air (ICAO-TI/IATA-DGR)

#### 14.1. UN number/ID number

Transport	Not subject
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#### 14.2. UN proper shipping name

#### 14.3. Transport hazard class(es)

Hazard identification number	
Class	
Classification code	

#### 14.4. Packing group

Packing group	
Labels	

#### 14.5. Environmental hazards

Environmentally hazardous substance mark	no
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#### 14.6. Special precautions for user

Special provisions	
Limited quantities	

#### 14.7. Maritime transport in bulk according to IMO instruments

Annex II of MARPOL 73/78	Not applicable, based on available data
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## SECTION 15: Regulatory information

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

#### European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
	No data available in the literature

Directive 2012/18/EU (Seveso III)

Not subject to registration according to Directive 2012/18/EU (Seveso III)

European drinking water standards (98/83/EC and 2020/2184)

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

Parameter	Parametric value	Note	Reference
Pesticides	0.1 µg/l		Listed in Annex I, Part B, of Directive (EU) 2020/2184 on the quality of water intended for human consumption.
Pesticides — Total	0.5 µg/l		Listed in Annex I, Part B, of Directive (EU) 2020/2184 on the quality of water intended for human consumption.

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
· 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)	Substances falling within one or more of the following points: (a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008: — carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation — reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation — skin sensitiser category 1, 1A or 1B — skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2 — serious eye damage category 1 or eye irritant category 2	Mixtures for tattooing purposes are subject to the restrictions of Regulation (EU) 2020/2081

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(b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council  
(c) substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a condition is specified in at least one of the columns g, h and i of the table in that Annex (d) substances listed in Appendix 13 to this Annex.  
The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry.

## National legislation Belgium

AC38

No data available

## National legislation The Netherlands

AC38

Waterbezwaarlijkheid	B (4); Algemene Beoordelingsmethodiek (ABM)
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## National legislation France

AC38

No data available

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]

Catégorie cancérigène	Titane (dioxyde de), en Ti; C2
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## National legislation Germany

AC38

WGK	1; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017
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titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]

TA-Luft	5.2.2/III
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1,2-benzisothiazol-3(2H)-one

TA-Luft	5.2.1
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reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)

TA-Luft	5.2.5/I
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## National legislation Austria

AC38

No data available

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

Gefahr der Sensibilisierung der Haut	5-Chlor-2-methyl-2,3- dihydroisothiazol-3-on und 2- Methyl-2,3-di-hydroisothiazol- 3-on (Gemisch im Verhältnis 3:1); Sh
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## National legislation United Kingdom

AC38

No data available

## Other relevant data

AC38

No data available

titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]

IARC - classification	2B; Titanium dioxide
TLV - Carcinogen	Titanium dioxide - nanoscale particles; A3
	Titanium dioxide - finescale particles; A3

## 15.2. Chemical safety assessment

No chemical safety assessment has been conducted for the mixture.

## SECTION 16: Other information

### Full text of any H- and EUH-statements referred to under section 3:

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.  
H351 Suspected of causing cancer if inhaled.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
EUH071 Corrosive to the respiratory tract.  
EUH210 Safety data sheet available on request.

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EUH208 Contains a sensitising substance. May produce an allergic reaction.

EUH212 Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

(*)	INTERNAL CLASSIFICATION BY BIG
ADI	Acceptable daily intake
AOEL	Acceptable operator exposure level
ATE	Acute Toxicity Estimate
BCF	Bioconcentration Factor
BEI	Biological Exposure Indices
CLP (EU-GHS)	Classification, labelling and packaging (Globally Harmonised System in Europe)
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
EC10	Effect Concentration 10 %
EC50	Effect Concentration 50 %
ErC50	EC50 in terms of reduction of growth rate
GLP	Good Laboratory Practice
LC0	Lethal Concentration 0 %
LC50	Lethal Concentration 50 %
LD50	Lethal Dose 50 %
LOAEC/LOAEL	Lowest Observed Adverse Effect Concentration/Lowest Observed Adverse Effect Level
NOAEC/NOAEL	No Observed Adverse Effect Concentration/No Observed Adverse Effect Level
NOEC/NOEL	No Observed Effect Concentration/No Observed Effect Level
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent, Bioaccumulative & Toxic
PNEC	Predicted No Effect Concentration
STP	Sludge Treatment Process
vPvB	very Persistent & very Bioaccumulative

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.