

Safety Data Sheet

RSR 421

Safety Data Sheet dated 08/10/2024 version 4



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

1.1. Product identifier

Mixture identification:

Trade name: RSR 421

Trade code: COL421N

UFI: G551-104G-500K-59FK

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

Recommended use: Water-based coating for walls

1.3. Details of the supplier of the safety data sheet

Company: FASSA Srl

Via Lazzaris, 3 - 31027 Spresiano (TV) - Italy

Tel. +39 0422 7222

Fax +39 0422 887509

Imported in the UK:

FASSA UK LTD

Ashchurch Business Centre,

Alexandra Way, Ashchurch, Tewkesbury GL20 8TD- UK

Tel. +44 (0) 1684.212272

Responsible: laboratorio.spresiano@fassabortolo.it

1.4. Emergency telephone number

NHS 111

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Skin Sens. 1 May cause an allergic skin reaction.

Aquatic Chronic 3 Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Hazard pictograms and Signal Word



Warning

Hazard statements

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P261 Avoid breathing fume/gas/mist/vapours/spray.

P280 Wear protective gloves/clothing.

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

P501 Dispose of contents/container in accordance with national regulation.

Special Provisions:

EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Contains:

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

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

Special provisions according to Annex XVII of REACH and subsequent amendments:

None.
The product has been classified according to Regulation (EC) No 1272/2008 (CLP) as amended by UK CLP Regulation, UK SI 2019/720 and UK SI 2020/1567.

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%.

Contains biocide with fungicide and algicide properties for dry films. Active substances: 2-octyl-2H-isothiazol-3-one (CAS 26530-20-1), pyrrithione zinc (CAS 13463-41-7), terbutryn (CAS 886-50-0). In accordance with art. 58 of Regulation no. 528/2012, this product is defined as a "treated article" (not a biocidal product).
No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: RSR 421

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number:
≥1 - <3 %	titanium dioxide	CAS:13463-67-7 EC:236-675-5 Index:022-006-00-2	Carc. 2, H351	01-2119489379-17-xxxx
≥0.05 - <0.1 %	Silica crystalline, quartz (respirable fraction)	CAS:14808-60-7 EC:238-878-4	STOT RE 1, H372	Exempted
≥0.05 - <0.1 %	Silica crystalline, cristobalite (respirable fraction)	CAS:14464-46-1 EC:238-455-4	STOT RE 1, H372	
≥0.005 - <0.025 %	pyrrithione zinc	CAS:13463-41-7 EC:236-671-3 Index:613-333-00-7	Acute Tox. 2, H330 Acute Tox. 3, H301 Eye Dam. 1, H318 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Repr. 1B, H360D, M-Chronic:10, M-Acute:1000	
			Acute Toxicity Estimate: ATE - Oral: 221mg/kg bw ATE - Inhalation (Dust/mist): 0.14mg/l	
≥0.005 - <0.025 %	Terbutryn	CAS:886-50-0 EC:212-950-5	Acute Tox. 4, H302 Skin Sens. 1B, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410, M-Chronic:100, M-Acute:100	
			Specific Concentration Limits: C ≥ 3%: Skin Sens. 1B H317	
			Acute Toxicity Estimate: ATE - Oral: 500mg/kg bw	
≥0.0015 - <0.005 %	2-octyl-2H-isothiazol-3-one	CAS:26530-20-1 EC:247-761-7 Index:613-112-00-5	Acute Tox. 3, H311 Acute Tox. 3, H301 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Skin Sens. 1A, H317 Skin Corr. 1, H314 Acute Tox. 2, H330, M-Chronic:100, M-Acute:100, EUH071	

			Specific Concentration Limits: C ≥ 0.0015%: Skin Sens. 1A H317
			Acute Toxicity Estimate: ATE - Oral: 125mg/kg bw ATE - Dermal: 311mg/kg bw ATE - Inhalation (Dust/mist): 0.27mg/l
≥0.0036 - <0.036 %	1,2-benzisothiazol-3(2H)-one	CAS:2634-33-5 EC:220-120-9 Index:613-088-00-6	Acute Tox. 2, H330 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410, M-Chronic:1, M- Acute:1
			Specific Concentration Limits: C ≥ 0.036%: Skin Sens. 1A H317
			Acute Toxicity Estimate: ATE - Oral: 450mg/kg bw ATE - Inhalation (Dust/mist): 0.21mg/l
≥0.0015 - <0.005 %	2-methylisothiazol-3(2H)-one	CAS:2682-20-4 EC:220-239-6 Index:613-326-00-9	Acute Tox. 2, H330 Acute Tox. 3, H311 Acute Tox. 3, H301 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410, M-Chronic:1, M-Acute:10, EUH071
			Specific Concentration Limits: 0.0015% ≤ C < 100%: Skin Sens. 1A H317
			Acute Toxicity Estimate: ATE - Oral: 120mg/kg bw ATE - Dermal: 300mg/kg bw ATE - Inhalation (Dust/mist): 0.134mg/l
≥0.00015 - <0.0015 %	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	CAS:55965-84-9 Index:613-167-00-5	Acute Tox. 2, H310 Acute Tox. 2, H330 Acute Tox. 3, H301 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410, M-Chronic:100, M-Acute:100, EUH071
			Specific Concentration Limits: 0.6% ≤ C < 100%: Skin Corr. 1C H314 0.06% ≤ C < 0.6%: Skin Irrit. 2 H315 0.6% ≤ C < 100%: Eye Dam. 1 H318 0.06% ≤ C < 0.6%: Eye Irrit. 2 H319 0.0015% ≤ C < 100%: Skin Sens. 1A H317
			Acute Toxicity Estimate: ATE - Oral: 66mg/kg bw ATE - Dermal: 141mg/kg bw ATE - Inhalation (Dust/mist): 0.17mg/l

The mixture contains ≥ 1% titanium dioxide CAS 13463-67-7 [in powder form containing ≥ 1 % of particles with aerodynamic diameter ≤ 10 µm]. Substance is classified as a category 2 inhalation carcinogenic (H351 inhalation) - Notes V,W,10. According to Regulation (EC) no. 1272/2008 (CLP), Annex II, part 2, section 2.12, the label on the packaging of liquid mixtures containing ≥ 1 % titanium dioxide particles with an aerodynamic diameter equal to or below 10 µm shall bear the following statement: EUH211: "Warning! Hazardous respirable droplets may be formed on vaporization. Do not breathe vapours or mist."

Classifications according to Regulation (EC) No 1272/2008 (CLP) as amended by UK CLP Regulation, UK SI 2019/720 and UK SI 2020/1567.

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Remove contaminated clothing immediately and dispose off safely.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

The symptoms and effects are as expected from the hazards as shown in section 2.

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

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Product is not flammable.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Burning produces heavy smoke.

In the event of fire and/or explosion do not breathe fumes.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

For emergency responders:

Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Material suitable for collection: inert absorbent material (e.g. sand, vermiculite)

After the product has been recovered, rinse the area and materials involved with water.

Retain contaminated washing water and dispose it.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Advice on general occupational hygiene:

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a cool, well-ventilated place, away from heat.

Keep away from food, drink and feed.

Incompatible materials:

See chapter 10.5

Instructions as regards storage premises:

Adequately ventilated premises.

Protect from frost.

7.3. Specific end use(s)

Recommendation(s)

See chapter 1.2

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

titanium dioxide

CAS: 13463-67-7	OEL Type	ACGIH		Long Term: 0.2 mg/m ³ Notes: Nanoscale particles - A3 - rspr bt, pnmc
				Long Term: 2.5 mg/m ³ Notes: Finescale particles - A3 - rspr bt, pnmc
	OEL Type	MAK	GERMANY	Long Term: 0.3 mg/m ³ ; Short Term: 2.4 mg/m ³ Notes: Respirable fraction, except ultrafine particles , Multiplied by the material density
	OEL Type	VLEP	BELGIUM	Long Term: 10 mg/m ³
	OEL Type	VLEP	FRANCE	Long Term: 10 mg/m ³
	OEL Type	VLEP	ROMANIA	Long Term: 10 mg/m ³ ; Short Term: 15 mg/m ³
	OEL Type	VLA	SPAIN	Long Term: 10 mg/m ³ Notes: Inhalable fraction
	OEL Type	SUVA	SWITZERLAND	Long Term: 3 mg/m ³ Notes: Respirable aerosol
	OEL Type	WEL	U.K.	Long Term: 10 mg/m ³ Notes: Inhalable aerosol
				Long Term: 4 mg/m ³ Notes: Respirable aerosol
	OEL Type	GVI	CROATIA	Long Term: 10 mg/m ³ Notes: Inhalable fraction
				Long Term: 4 mg/m ³ Notes: Respirable fraction
	OEL Type	AGW	GERMANY	Long Term: 1.25 mg/m ³ Notes: Respirable dust particles
	OEL Type	NDS	POLAND	Long Term: 10 mg/m ³ Notes: Inhalable fraction

Silica crystalline, quartz (respirable fraction)

CAS: 14808-60-7	OEL Type	ACGIH		Long Term: 0.025 mg/m ³ Notes: (R), A2 - Pulm fibrosis, lung cancer
	OEL Type	EU		Long Term: 0.1 mg/m ³
	OEL Type	MAK	AUSTRIA	Long Term: 0.05 mg/m ³
	OEL Type	VLEP	FRANCE	Long Term: 0.1 mg/m ³ Notes: Respirable aerosol
	OEL Type	VLA	SPAIN	Long Term: 0.05 mg/m ³
	OEL Type	ÁK	HUNGARY	Long Term: 0.15 mg/m ³ Notes: Respirable aerosol
	OEL Type	MAC	NETHERLANDS	Long Term: 0.075 mg/m ³ Notes: Respirable dust
	OEL Type	SUVA	SWITZERLAND	Long Term: 0.15 mg/m ³ Notes: Respirable aerosol

OEL Type	GVI	CROATIA	Long Term: 0.1 mg/m3
OEL Type	NDS	POLAND	Long Term: 0.1 mg/m3
OEL Type	MV	SLOVENIA	Long Term: 0.15 mg/m3
OEL Type	IPRV	LITHUANIA	Long Term: 0.1 mg/m3

Silica crystalline, cristobalite (respirable fraction)

CAS: 14464-46-1 OEL Type ACGIH Long Term: 0.025 mg/m3
Notes: (R), A2 - Pulm fibrosis, lung cancer

OEL Type EU Long Term: 0.1 mg/m3

2-octyl-2H-isothiazol-3-one

CAS: 26530-20-1 OEL Type MAK AUSTRIA Long Term: 0.05 mg/m3; Short Term: 0.1 mg/m3
Notes: Inhalable aerosol

OEL Type MAK GERMANY Long Term: 0.05 mg/m3; Short Term: 0.1 mg/m3
Notes: Inhalable fraction, Skin

OEL Type SUVA SWITZERLAND Long Term: 0.05 mg/m3; Short Term: 0.1 mg/m3
Notes: Inhalable aerosol

OEL Type AGW GERMANY Long Term: 0.05 mg/m3; Short Term: 0.1 mg/m3
Notes: Inhalable fraction, Skin

2-methylisothiazol-3(2H)-one

CAS: 2682-20-4 OEL Type MAK AUSTRIA Long Term: 0.05 mg/m3

OEL Type MAK GERMANY Long Term: 0.2 mg/m3; Short Term: 0.4 mg/m3
Notes: Inhalable fraction

OEL Type SUVA SWITZERLAND Long Term: 0.2 mg/m3; Short Term: 0.4 mg/m3
Notes: Inhalable fraction

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

CAS: 55965-84-9 OEL Type MAK AUSTRIA Long Term: 0.05 mg/m3

OEL Type MAK GERMANY Long Term: 0.2 mg/m3; Short Term: 0.4 mg/m3
Notes: Inhalable fraction

OEL Type SUVA SWITZERLAND Long Term: 0.2 mg/m3; Short Term: 0.4 mg/m3
Notes: Inhalable fraction

8.2. Exposure controls

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction.

Eye protection:

Eye glasses with side protection (EN 166).

Protection for skin:

Use suitable clothing that provides complete protection to the skin according to activity and exposure (EN 14605/EN 13982), e.g. overall, apron, safety shoes, suitable clothing.

Protection for hands:

There is no material or combination of materials for gloves that can guarantee unlimited resistance to any individual chemical or combination of chemicals.

For prolonged or repeated handling, use chemical resistant gloves.

Suitable materials for safety gloves (EN 374/EN 16523); NBR (Nitril rubber): thickness ≥ 0.4 mm; permeation time ≥ 480 min.

Butyl caoutchouc (butyl rubber): thickness ≥ 0.4 mm; permeation time ≥ 480 min

The choice of suitable gloves does not only depend on the material, but also on other quality characteristics that vary from one manufacturer to another and on the manner and times according to which the mixture is used.

Respiratory protection:

If workers are exposed to concentrations above the exposure limit they must use appropriate, certified respirators.

Combination filtering device (EN 14387): mask with filter A-P2.

Environmental exposure controls:

See point 6.2

Hygienic and Technical measures

See section 7.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid

Appearance: thick liquid

Color: various
Odour: Characteristic
Melting point/freezing point: N.D.
Boiling point or initial boiling point and boiling range: N.D.
Flammability: N.A.
Lower and upper explosion limit: N.D.
Flash point: > 93°C
Auto-ignition temperature: N.D.
Decomposition temperature: N.D.
pH: $\geq 8.00 \leq 9.00$ (Internal method)
Kinematic viscosity: > 20.5 mm²/s (40 °C)
Density and/or relative density: 1,70 ÷ 1,90 kg/l (Internal method)
Relative vapour density: N.D.
Vapour pressure: N.D.
Solubility in water: miscible in all ratio
Solubility in oil: No data available
Partition coefficient n-octanol/water (log value): N.A.

Particle characteristics:

Particle size: N.A.

9.2. Other information

Conductivity: N.D.
Explosive properties: N.A. (Internal assessment)
Oxidizing properties: N.A. (Internal assessment)
Evaporation rate: N.A.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Keep away from heat sources.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

No hazardous decomposition products when stored and handled correctly.
See chapter 5.2

SECTION 11: Toxicological information

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

Information on hazard classes as defined in the retained Regulation (EC) No 1272/2008 (CLP) as amended by UK CLP Regulation, UK SI 2019/720 and UK SI 2020/1567.

Toxicological Information of the Preparation

a) acute toxicity	Not classified Based on available data, the classification criteria are not met
b) skin corrosion/irritation	Not classified Based on available data, the classification criteria are not met
c) serious eye damage/irritation	Not classified Based on available data, the classification criteria are not met
d) respiratory or skin sensitisation	The product is classified: Skin Sens. 1(H317)
e) germ cell mutagenicity	Not classified Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified

i) STOT-repeated exposure	Based on available data, the classification criteria are not met Not classified
j) aspiration hazard	Based on available data, the classification criteria are not met Not classified
	Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

titanium dioxide

CAS: 13463-67-7 a) acute toxicity LD50 Oral Rat > 5000 mg/kg
LC50 Inhalation Dust Rat > 6.82 mg/l 4h

pyrithione zinc

CAS: 13463-41-7 a) acute toxicity ATE - Oral: 221 mg/kg bw
ATE - Inhalation (Dust/mist): 0.14 mg/l

Terbutryn

CAS: 886-50-0 a) acute toxicity ATE - Oral: 500 mg/kg bw

2-octyl-2H-isothiazol-3-one

CAS: 26530-20-1 a) acute toxicity ATE - Oral: 125 mg/kg bw
ATE - Dermal: 311 mg/kg bw
ATE - Inhalation (Dust/mist): 0.27 mg/l

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

CAS: 2634-33-5 a) acute toxicity ATE - Oral: 450 mg/kg bw
ATE - Inhalation (Dust/mist): 0.21 mg/l

2-methylisothiazol-3(2H)-one

CAS: 2682-20-4 a) acute toxicity ATE - Oral: 120 mg/kg bw
ATE - Dermal: 300 mg/kg bw
ATE - Inhalation (Dust/mist): 0.134 mg/l

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

CAS: 55965-84-9 a) acute toxicity ATE - Oral: 66 mg/kg bw
ATE - Dermal: 141 mg/kg bw
ATE - Inhalation (Dust/mist): 0.17 mg/l

11.2 Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration $\geq 0.1\%$

SECTION 12: Ecological information

Adopt good working practices, so that the product is not released into the environment.

12.1. Toxicity

Eco-Toxicological Information:

Harmful to aquatic life with long lasting effects.

List of Eco-Toxicological properties of the product

The product is classified: Aquatic Chronic 3(H412)

List of Eco-Toxicological properties of the components

titanium dioxide

CAS: 13463-67-7 a) Aquatic acute toxicity: LC50 Fish > 1000 mg/l 96h
a) Aquatic acute toxicity: EC50 Daphnia > 1000 mg/l 48h
a) Aquatic acute toxicity: EC50 Algae 61 mg/l 72h

pyrithione zinc

CAS: 13463-41-7 a) Aquatic acute toxicity: LC50 Fish 0.0104 mg/l 96h
a) Aquatic acute toxicity: EC50 Daphnia 0.051 mg/l 48h
a) Aquatic acute toxicity: EC50 Algae 0.0013 mg/l 72h
a) Aquatic acute toxicity: EC50 Freshwater algae 0.051 mg/l 72h
b) Aquatic chronic toxicity: NOEC Fish 0.00125 mg/l 28d
b) Aquatic chronic toxicity: NOEC Daphnia 0.0022 mg/l 21d

- b) Aquatic chronic toxicity: NOEC Algae 0.00046 mg/l 96h
- b) Aquatic chronic toxicity: NOEC Freshwater algae 0.0149 mg/l 72h

Terbutryn

- CAS: 886-50-0
- a) Aquatic acute toxicity: LC50 Fish 1.9 mg/l 96h
 - a) Aquatic acute toxicity: EC50 Algae 6.7 µg/l 72h
 - a) Aquatic acute toxicity: EC50 Daphnia 6.4 mg/l 48h
 - b) Aquatic chronic toxicity: NOEC Daphnia 0.05 mg/l 21d
 - b) Aquatic chronic toxicity: NOEC Fish 0.073 mg/l 28d
 - b) Aquatic chronic toxicity: NOEC Algae 0.0005 mg/l 72h

2-octyl-2H-isothiazol-3-one

- CAS: 26530-20-1
- a) Aquatic acute toxicity: LC50 Fish 0.036 mg/l 96h
 - a) Aquatic acute toxicity: EC50 Daphnia 0.42 mg/l 48h
 - a) Aquatic acute toxicity: EC50 Algae 0.084 mg/l 72h
 - b) Aquatic chronic toxicity: NOEC Fish 0.022 mg/l 28d
 - b) Aquatic chronic toxicity: NOEC Daphnia 0.002 mg/l 21d
 - b) Aquatic chronic toxicity: NOEC Algae 0.004 mg/l 72h

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

- CAS: 2634-33-5
- a) Aquatic acute toxicity: LC50 Fish 2.2 mg/l 96h
 - a) Aquatic acute toxicity: EC50 Daphnia 3.27 mg/l 48h
 - a) Aquatic acute toxicity: EC50 Algae 0.11 mg/l 72h
 - b) Aquatic chronic toxicity: NOEC Fish 0.21 mg/l - 28d
 - b) Aquatic chronic toxicity: NOEC Daphnia 1.2 mg/l - 21d
 - b) Aquatic chronic toxicity: NOEC Algae 0.04 mg/l 72h

2-methylisothiazol-3(2H)-one

- CAS: 2682-20-4
- a) Aquatic acute toxicity: LC50 Fish 6 mg/l 96h
 - a) Aquatic acute toxicity: EC50 Daphnia 1.68 mg/l 48h
 - a) Aquatic acute toxicity: EC50 Algae 0.157 mg/l 72h
 - b) Aquatic chronic toxicity: NOEC Fish 2.1 mg/l - 28d
 - b) Aquatic chronic toxicity: NOEC Daphnia 0.55 mg/l - 21d
 - b) Aquatic chronic toxicity: NOEC Algae 0.03 mg/l 72h

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

- CAS: 55965-84-9
- a) Aquatic acute toxicity: LC50 Fish 0.22 mg/l 96h
 - a) Aquatic acute toxicity: EC50 Daphnia 0.1 mg/l 48h
 - a) Aquatic acute toxicity: EC50 Algae 0.0052 mg/l 48h
 - a) Aquatic acute toxicity: EC50 Freshwater algae 0.048 mg/l 72h
 - b) Aquatic chronic toxicity: NOEC Fish 0.098 mg/l - 28d
 - b) Aquatic chronic toxicity: NOEC Daphnia 0.004 mg/l - 21d
 - b) Aquatic chronic toxicity: NOEC Algae 0.00064 mg/l 48h
 - b) Aquatic chronic toxicity: NOEC Freshwater algae 0.0012 mg/l 72h

12.2. Persistence and degradability

pyrithione zinc

CAS: 13463-41-7 Readily biodegradable

2-octyl-2H-isothiazol-3-one

CAS: 26530-20-1 Non-readily biodegradable

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

CAS: 2634-33-5 Non-readily biodegradable

2-methylisothiazol-3(2H)-one

CAS: 2682-20-4 Readily biodegradable

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

CAS: 55965-84-9 Non-readily biodegradable

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT or vPvB substances present in concentration $\geq 0.1\%$

12.6 Endocrine disrupting properties

No endocrine disruptor substances present in concentration $\geq 0.1\%$

12.7 Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

Do not allow it to enter drains or watercourses.

Dispose of containers contaminated by the product in accordance with local or national legal provisions.

Once the product has expired, it must be disposed of in accordance with current legislation.

SECTION 14: Transport information

Not classified as dangerous in the meaning of transport regulations.

14.1. UN number or ID number

N/A

14.2. UN proper shipping name

ADR-Shipping Name: N/A

IATA-Shipping Name: N/A

IMDG-Shipping Name: N/A

14.3. Transport hazard class(es)

ADR-Class: N/A

IATA-Class: N/A

IMDG-Class: N/A

14.4. Packing group

ADR-Packing Group: N/A

IATA-Packing group: N/A

IMDG-Packing group: N/A

14.5. Environmental hazards

Marine pollutant: No

Environmental Pollutant: No

IMDG-EMS: N/A

14.6. Special precautions for user

Road and Rail (ADR-RID):

ADR exempt:

ADR-Label: N/A

ADR - Hazard identification number: N/A

ADR-Special Provisions: N/A

ADR-Transport category (Tunnel restriction code):

Air (IATA):

IATA-Passenger Aircraft: N/A

IATA-Cargo Aircraft: N/A

IATA-Label: N/A

IATA-Subsidiary hazards: N/A

IATA-Erg: N/A

IATA-Special Provisions: N/A

Sea (IMDG):

IMDG-Stowage and handling: N/A

IMDG-Segregation: N/A

IMDG-Subsidiary hazards: N/A

IMDG-Special Provisions: N/A

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

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

- Dir. 98/24/EC (Risks related to chemical agents at work)
- Dir. 2000/39/EC (Occupational exposure limit values)
- Directive 2010/75/EU
- Regulation (EC) n. 1907/2006 (REACH)
- Regulation (EC) n. 1272/2008 (CLP)
- Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
- Regulation (EU) n. 2020/878
- Regulation (EU) n. 286/2011 (ATP 2 CLP)
- Regulation (EU) n. 618/2012 (ATP 3 CLP)
- Regulation (EU) n. 487/2013 (ATP 4 CLP)
- Regulation (EU) n. 944/2013 (ATP 5 CLP)
- Regulation (EU) n. 605/2014 (ATP 6 CLP)
- Regulation (EU) n. 2015/1221 (ATP 7 CLP)
- Regulation (EU) n. 2016/918 (ATP 8 CLP)
- Regulation (EU) n. 2016/1179 (ATP 9 CLP)
- Regulation (EU) n. 2017/776 (ATP 10 CLP)
- Regulation (EU) n. 2018/669 (ATP 11 CLP)
- Regulation (EU) n. 2018/1480 (ATP 13 CLP)
- Regulation (EU) n. 2019/521 (ATP 12 CLP)
- Regulation (EU) n. 2020/217 (ATP 14 CLP)
- Regulation (EU) n. 2020/1182 (ATP 15 CLP)
- Regulation (EU) n. 2021/643 (ATP 16 CLP)
- Regulation (EU) n. 2021/849 (ATP 17 CLP)
- Regulation (EU) n. 2022/692 (ATP 18 CLP)
- Regulation (EU) n. 2023/1434 (ATP 19 CLP)
- Regulation (EU) n. 2023/1435 (ATP 20 CLP)
- Regulation (EU) n. 2024/197 (ATP 21 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

- Restrictions related to the product: 3
- Restrictions related to the substances contained: 30, 75

Provisions related to directive EU 2012/18 (Seveso III):

None

Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

Class 2: hazardous for water.

SVHC Substances:

On the basis of available data, the product does not contain any SVHC in percentage ≥ 0.1%.

VOC content limit value (Directive 2004/42/EC) Category A/c, WB: max. VOC 40 g/l; VOC in product <40 g/l

Contains biocide with fungicide and algicide properties for dry films. Active substances: 2-octyl-2H-isothiazol-3-one (CAS 26530-20-1), pyrrithione zinc (CAS 13463-41-7), terbutryn (CAS 886-50-0). In accordance with art. 58 of Regulation no. 528/2012, this product is defined as a "treated article" (not a biocidal product).

Relevant EU provisions transposed through retained EU legislation:

- UK REACH List of restrictions (Annex XVII);
- UK REACH Candidate list of substances of very high concern (SVHC) for authorisation;
- UK REACK List of substances subject to authorisation (Annex XIV);
- Export and import of hazardous chemicals - Prior informed consent (PIC regulation).

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
EUH071	Corrosive to the respiratory tract.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.

H311	Toxic 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.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H351	Suspected of causing cancer if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H372	Causes damage to organs through prolonged or repeated exposure if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
3.1/2/Dermal	Acute Tox. 2	Acute toxicity (dermal), Category 2
3.1/2/Inhal	Acute Tox. 2	Acute toxicity (inhalation), Category 2
3.1/3/Dermal	Acute Tox. 3	Acute toxicity (dermal), Category 3
3.1/3/Oral	Acute Tox. 3	Acute toxicity (oral), Category 3
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/1	Skin Corr. 1	Skin corrosion, Category 1
3.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
3.2/1C	Skin Corr. 1C	Skin corrosion, Category 1C
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.4.2/1A	Skin Sens. 1A	Skin Sensitisation, Category 1A
3.6/2	Carc. 2	Carcinogenicity, Category 2
3.9/1	STOT RE 1	Specific target organ toxicity — repeated exposure, Category 1
4.1/A1	Aquatic Acute 1	Acute aquatic hazard, category 1
4.1/C1	Aquatic Chronic 1	Chronic (long term) aquatic hazard, category 1
4.1/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008 Classification procedure

Skin Sens. 1, H317	Calculation method
Aquatic Chronic 3, H412	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold
Safety data sheets of raw materials suppliers.

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE: Acute Toxicity Estimate
ATEmix: Acute toxicity Estimate (Mixtures)
BEI: Biological Exposure Index
CAS: Chemical Abstracts Service (division of the American Chemical Society).
CAV: Poison Center
CE: European Community

CLP: Classification, Labeling, Packaging.
 CMR: Carcinogenic, Mutagenic and Reprotoxic
 COV: Volatile Organic Compound
 CSA: Chemical Safety Assessment
 CSR: Chemical Safety Report
 DNEL: Derived No Effect Level.
 EC50: Half Maximal Effective Concentration
 ECHA: European Chemicals Agency
 EINECS: European Inventory of Existing Commercial Chemical Substances.
 ES: Exposure Scenario
 GefStoffVO: Ordinance on Hazardous Substances, Germany.
 GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
 IARC: International Agency for Research on Cancer
 IATA: International Air Transport Association.
 IC50: half maximal inhibitory concentration
 IMDG: International Maritime Code for Dangerous Goods.
 LC50: Lethal concentration, for 50 percent of test population.
 LD50: Lethal dose, for 50 percent of test population.
 LDLo: Leathal Dose Low
 N.A.: Not Applicable
 N/A: Not Applicable
 N/D: Not defined/ Not available
 N.D.: Not available
 NIOSH: National Institute for Occupational Safety and Health
 NOAEL: No Observed Adverse Effect Level
 OSHA: Occupational Safety and Health Administration
 PBT: Persistent, Bioaccumulative and Toxic
 PGK: Packaging Instruction
 PNEC: Predicted No Effect Concentration.
 PSG: Passengers
 RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
 STEL: Short Term Exposure limit.
 STOT: Specific Target Organ Toxicity.
 TLV: Threshold Limiting Value.
 TLV-TWA: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
 vPvB: Very Persistent, Very Bioaccumulative.
 WGK: German Water Hazard Class.

Paragraphs modified from the previous revision:

- SECTION 2: Hazards identification
- SECTION 3: Composition/information on ingredients
- SECTION 6: Accidental release measures
- SECTION 7: Handling and storage
- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties
- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 14: Transport information
- SECTION 15: Regulatory information
- SECTION 16: Other information