Safety Data Sheet

Conforms to Regulation (EC) No. 1907/2006 (REACH), Article 31, Annex II, as amended by Commission Regulation (EU) 2020/878

R3 PLUS

Date of first edition: 9/24/2019

Safety Data Sheet dated 02/10/2026 version 6

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

1.1. Product identifier

Mixture identification:

Trade name: R3 PLUS

Trade code: S100B0127 23

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

Recommended use: Adhesives, sealants

Uses advised against: All uses other than recommended ones

1.3. Details of the supplier of the safety data sheet

Company: KERAKOLL S.p.A.

Via dell'Artigianato, 9

41049 Sassuolo (MODENA) - ITALY

Tel.+39 0536 816511 Fax. +39 0536816581

safety@kerakoll.com

1.4. Emergency telephone number

European emergency phone number 112

Ireland Emergency medical information: (seven days) contact National Poisons Information Centre,

Beaumont Hospital, Dublin 9 DOV2NO, Ireland.

Members of the public Number (8 am-10 pm): +353 (0)1 809 2166

Healthcare professional telephone Number (24hrs): +353 (0)1 809 2566

Malta In case of emergency call: +356 2395 2000 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

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

Hazard statements

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

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

EUH208 Contains 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.

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

None.

2.3. Other hazards

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

Other Hazards: Contains biocidal product: C(M)IT/MIT (3:1); The product is identified as an article treated pursuant to art. 58 of Regulation (EU) no. 528/2012 and subsequent amendments. Possible skin exposure must be avoided. Protective gloves and work clothes are required. Avoid releasing product into the environment. When washing work equipment, water must not be dispersed in the soil or on surface water

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: R3 PLUS

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

Qty	Name	Ident. Numb.	Classification	Registration Number
≥3-<5 %	Propane-1,2-diol, propoxylated	CAS:25322-69-4 EC:500-039-8	Acute Tox. 4, H302	
≥0.3-<0.5 %	Alcohols, C16-18 and C18-unsatd., ethoxylated	CAS:68920-66-1 EC:500-236-9	Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 3, H412, M-Acute:1	
<0.036 %	bronopol (INN); 2-bromo-2-nitropropane-1,3-diol	CAS:52-51-7 EC:200-143-0 Index:603-085-00-8	STOT SE 3, H335; Skin Irrit. 2, H315; Eye Dam. 1, H318; Aquatic Acute 1, H400; Acute Tox. 4, H312; Aquatic Chronic 1, H410; Acute Tox. 3, H301; Acute Tox. 3, H331, M-Chronic:10, M-Acute:100	
<0.01 %	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-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 %	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, H330; Acute Tox. 2, H310; 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: C ≥ 0.6%: Skin Corr. 1C H314 0.06% ≤ C < 0.6%: Skin Irrit. 2 H315 C ≥ 0.6%: Eye Dam. 1 H318 0.06% ≤ C < 0.6%: Eye Irrit. 2 H319 C ≥ 0.0015%: Skin Sens. 1A H317	

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

Wash immediately with water.

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

N.A.

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

N.A.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO_2).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

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.

Retain contaminated washing water and dispose it.

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

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

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.

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

7.2. Conditions for safe storage, including any incompatibilities

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

Limestone

CAS: 1317-65-3	NATIONAL	BELGIUM	Long Term: 10 mg/m3 Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	BULGARIA	Long Term: 10 mg/m3 Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
	NATIONAL	SWITZERLAND	Long Term: 3 mg/m3 Notes: (1) respirable aerosol Source: suva.ch/valeurs-limites
	NATIONAL	SPAIN	Long Term: 10 mg/m3 Notes: (1) inhalable aerosol Source: LEP 2022
	NATIONAL	ESTONIA	Long Term: 10 mg/m3 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
			Long Term: 5 mg/m3 Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	GREECE	Long Term: 10 mg/m3 Notes: εισπν. Source: ΦΕΚ 94/Α` 13.5.1999
			Long Term: 5 mg/m3 Notes: αναπν. Source: ΦΕΚ 94/Α` 13.5.1999
	NATIONAL	HUNGARY	Long Term: 10 mg/m3 Notes: N Source: 5/2020. (II. 6.) ITM rendelet
	NATIONAL	IRELAND	Long Term: 10 mg/m3 Source: 2021 Code of Practice
			Long Term: 4 mg/m3 Source: 2021 Code of Practice

sodium hydroxide; caustic soda

CAS: 1310-73-2	ACGIH		Short Term: Ceiling - 2 mg/m3 Notes: URT, eye, and skin irr
	NATIONAL	AUSTRIA	Long Term: 2 mg/m3; Short Term: Ceiling - 4 mg/m3 Notes: 5(Mow), 8x, MAK, E Source: BGBl. II Nr. 156/2021
	NATIONAL	BELGIUM	Long Term: 2 mg/m3 Notes: M Source: Code du bien-être au travail, Livre VI, Titre 1er, Annexe VI.1-1
	NATIONAL	BULGARIA	Long Term: 2 mg/m3 Source: НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г.
	NATIONAL	CZECHIA	Long Term: 1 mg/m3; Short Term: Ceiling - 2 mg/m3 Notes: I Source: Nařízení vlády č. 361-2007 Sb
	NATIONAL	DENMARK	Short Term: Ceiling - 2 mg/m3 Notes: L Source: BEK nr 2203 af 29/11/2021
	NATIONAL	SPAIN	Short Term: 2 mg/m3 Source: LEP 2022
	NATIONAL	ESTONIA	Long Term: 1 mg/m3; Short Term: 2 mg/m3 Notes: * Source: Vabariigi Valitsuse, 20. märtsi 2001. a määrus nr 105
	NATIONAL	FINLAND	Short Term: Ceiling - 2 mg/m3 Notes: kattoarvo Source: HTP-ARVOT 2020
	NATIONAL	FRANCE	Long Term: 2 mg/m3 Source: INRS outil65
	NATIONAL	GREECE	Long Term: 2 mg/m3; Short Term: 2 mg/m3 Source: ΦΕΚ 94/Α` 13.5.1999

NATIONAL	CROATIA	Short Term: 2 mg/m3 Source: NN 1/2021
NATIONAL	HUNGARY	Long Term: 1 mg/m3; Short Term: 2 mg/m3 Notes: m, N Source: 5/2020. (II. 6.) ITM rendelet
NATIONAL	IRELAND	Short Term: 2 mg/m3 Source: 2021 Code of Practice
NATIONAL	LITHUANIA	Short Term: Ceiling - 2 mg/m3 Notes: Ū Source: 2011 m. rugsėjo 1 d. Nr. V-824/A1-389
NATIONAL	LATVIA	Long Term: 0.5 mg/m3 Source: KN325P1
NATIONAL	NORWAY	Short Term: Ceiling - 2 mg/m3 Notes: T Source: FOR-2021-06-28-2248
NATIONAL	POLAND	Long Term: 0.5 mg/m3; Short Term: 1 mg/m3 Source: Dz.U. 2018 poz. 1286
NATIONAL	ROMANIA	Long Term: 1 mg/m3; Short Term: 3 mg/m3
NATIONAL	SLOVAKIA	Long Term: 2 mg/m3 Source: 355 NARIADENIE VLÁDY z 10. mája 2006
NATIONAL	SWEDEN	Long Term: 1 mg/m3; Short Term: 2 mg/m3 Notes: 3 Source: AFS 2021:3
SUVA	SWITZERLAND	Long Term: 2 mg/m3; Short Term: 2 mg/m3 Notes: TWA mg/m3: (i), SSC, VRS Peau Yeux / OAW Haut Auge, NIOSH OSHA Source: suva.ch/valeurs-limites

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

CAS: 55965-84-9

NATIONAL	AUSTRIA	Long Term: 0.05 mg/m3 Notes: MAK, Sh Source: GKV, BGBl. II Nr. 156/2021
NATIONAL	GERMANY	Long Term: 0.2 mg/m3; Short Term: 0.4 mg/m3 Notes: DFG; Long term and short term: inhalable fraction Source: TRGS900
SUVA	SWITZERLAND	Long Term: 0.2 mg/m3; Short Term: 0.4 mg/m3 Notes: TWA mg/m3: (i), S, SSC, VRS Peau Yeux / OAW Haut Auge Source: suva.ch/valeurs-limites

Predicted No Effect Concentration (PNEC) values

Propane-1,2-diol, propoxylated

CAS: 25322-69-4

Exposure Route: Fresh Water; PNEC Limit: 150 mg/m3

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 1 mg/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 100 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 592 µg/kg

Exposure Route: Freshwater sediments; PNEC Limit: 59.2 µg/kg

Exposure Route: Soil; PNEC Limit: 69.8 µg/kg

Alcohols, C16-18 and C18-unsatd., ethoxylated

CAS: 68920-66-1

Exposure Route: Fresh Water; PNEC Limit: 7.2 mg/m3

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 100 mg/m3

Exposure Route: Marine water; PNEC Limit: 700 ng/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 10000 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 22.79 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 2.28 mg/kg

Exposure Route: Soil; PNEC Limit: 1 mg/kg

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7

Exposure Route: Fresh Water; PNEC Limit: 10 mg/m3

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 2.5 mg/m3

Exposure Route: Marine water; PNEC Limit: 800 ng/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 430 mg/m3

Exposure Route: Freshwater sediments; PNEC Limit: 41 mg/m3

Exposure Route: Marine water sediments; PNEC Limit: 3.28 µg/kg

Exposure Route: Soil; PNEC Limit: 500 µg/kg

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

CAS: 2634-33-5 Exposure Route: Fresh Water; PNEC Limit: 4.03 mg/m3

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 1.1 mg/m3

Exposure Route: Marine water; PNEC Limit: 403 ng/l

Exposure Route: Intermittent releases (marine water); PNEC Limit: 110 ng/l

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 1.03 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 49.9 µg/kg

Exposure Route: Marine water sediments; PNEC Limit: 4.99 µg/kg

Exposure Route: Soil; PNEC Limit: 3 mg/kg

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

CAS: 55965-84-9 Exposure Route: Fresh Water; PNEC Limit: 3.39 mg/m3

Exposure Route: Intermittent releases (fresh water); PNEC Limit: 3.39 mg/m3

Exposure Route: Marine water; PNEC Limit: 3.39 mg/m3

Exposure Route: Intermittent releases (marine water); PNEC Limit: 3.39 mg/m3

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 230 mg/m3

Exposure Route: Freshwater sediments; PNEC Limit: 27 mg/m3

Exposure Route: Marine water sediments; PNEC Limit: 27 mg/m3

Exposure Route: Soil; PNEC Limit: 10 mg/m3

Derived No Effect Level (DNEL) values

Propane-1,2-diol, propoxylated

CAS: 25322-69-4 Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 98 mg/kg/day; Consumer: 29 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 10 mg/kg/day; Consumer: 10 mg/kg/day

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 13.9 mg/kg/day; Consumer: 8.3 mg/kg/day

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 8.3 mg/kg

Alcohols, C16-18 and C18-unsatd., ethoxylated

CAS: 68920-66-1 Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 294 mg/kg/day; Consumer: 87 mg/kg/day

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 2080 mg/kg; Consumer: 1250 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 25 mg/kg

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7 Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 4.1 mg/kg/day; Consumer: 1.2 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Worker Professional: 12.3 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 4.2 mg/kg/day; Consumer: 1.3 mg/kg/day

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 4.2 mg/kg/day; Consumer: 1.3 mg/kg/day

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 2.3 mg/kg; Consumer: 1.4 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects
Worker Professional: 7 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 350 µg/kg

Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects
Consumer: 1.1 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Long Term, local effects
Worker Professional: 0.013 mg/cm²; Consumer: 0.008 mg/cm²

Exposure Route: Human Dermal; Exposure Frequency: Short Term, local effects
Worker Professional: 0.013 mg/cm²; Consumer: 0.008 mg/cm²

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

CAS: 2634-33-5 Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 6.81 mg/kg/day; Consumer: 1.2 mg/kg/day

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 966 µg/kg; Consumer: 345 µg/kg

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

CAS: 55965-84-9 Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Professional: 20 µg/m³; Consumer: 20 µg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 40 µg/m³; Consumer: 20 µg/m³

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 90 µg/kg

Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects
Consumer: 110 µg/kg

8.2. Exposure controls

Eye protection:

Eye glasses with side protection.(EN166)

Protection for skin:

Chemical protection clothing. Safety shoes.

Protection for hands:

Nitrile rubber .

Respiratory protection:

N.A.

Thermal Hazards:

Not expected if used as intended

Environmental exposure controls:

Prevent the product from entering sewers or surface and underground water.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Yellow
Odour:	Acidic
pH:	=7.20
Kinematic viscosity:	Not Relevant Notes: Not determined, as it is not required for CLP classification
Melting point/freezing point:	100 °C (212 °F)
Boiling point or initial boiling point and boiling range:	100 °C (212 °F)
Flash point:	100 °C (212 °F)
Lower and upper explosion limit:	Not Relevant Notes: Not applicable as the mixture is not flammable

Relative vapour density:	N.A.
Vapour pressure:	N.A.
Density and/or relative density:	1.25 g/cm3
Solubility in water:	Slightly soluble
Solubility in oil:	Not Relevant Notes: Not determined, as it is not required for CLP classification
Partition coefficient n-octanol/water (log value):	Not Relevant Notes: Not applicable to mixtures
Auto-ignition temperature:	Not Relevant Notes: Not applicable as the mixture is not flammable
Decomposition temperature:	Not Relevant Notes: Not applicable, as the mixture is not self-reactive
Flammability:	Not Relevant Notes: Not applicable as the mixture is not flammable
Volatile Organic compounds - VOCs =	0.00%; 0.00g/L

Particle characteristics:

Particle size: N.A.

9.2. Other information

Viscosity: 28,000.00 cPo

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Data not available.

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

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

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

Toxicological information on main components of the mixture:

Propane-1,2-diol, propoxylated

CAS: 25322-69-4	a) acute toxicity	LD50 Oral Rat > 5000 mg/kg
		LC50 Inhalation Vapour Rat = 0.17 mg/l 1h
		LD50 Skin Rabbit > 3000 mg/kg 1h
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative
	c) serious eye damage/irritation	Eye Irritant Rabbit No
	d) respiratory or skin sensitisation	Respiratory Sensitization Negative
		Skin Sensitization Negative
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat >= 1000 mg/kg

Alcohols, C16-18 and C18-unsatd., ethoxylated

CAS: 68920-66-1	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg
		LC50 Inhalation Vapour Rat > 100 mg/m3 6h
		LD50 Skin Rabbit > 2000 mg/kg 24h
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive 4h
	c) serious eye damage/irritation	Eye Irritant Rabbit No
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative
	f) carcinogenicity	Genotoxicity Rat Negative
	g) reproductive toxicity	No Observed Adverse Effect Level Skin Rat >= 250 mg/kg

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7	a) acute toxicity	LD50 Oral Rat = 305 mg/kg
		LC50 Inhalation of aerosol Rat >= 0.59 mg/l 4h
		LD50 Skin Rat > 2000 mg/kg 24h
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive 4h
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Negative
	f) carcinogenicity	Genotoxicity Negative
		Carcinogenicity Oral Rat Negative
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat 200

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

CAS: 2634-33-5	a) acute toxicity	ATE - Oral: 450 mg/kg bw
		ATE - Inhalation (Dust/mist): 0.21 mg/l
		LD50 Oral Rat = 670 mg/kg
		LD50 Skin Rat > 2000 mg/kg
	b) skin corrosion/irritation	Skin Irritant Rabbit Negative
	c) serious eye damage/irritation	Eye Corrosive Positive
	d) respiratory or skin sensitisation	Skin Sensitization Guineapig Positive
	f) carcinogenicity	Genotoxicity Rat Negative

	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 112 mg/kg

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	LD50 Oral Rat = 69 mg/kg
		LD50 Skin Rabbit = 141 mg/kg
		LC50 Inhalation Rat = 0.33 mg/l 4h
	b) skin corrosion/irritation	Skin Irritant Rabbit Positive
	c) serious eye damage/irritation	Eye Corrosive Rabbit Positive
	d) respiratory or skin sensitisation	Skin Sensitization Positive
	f) carcinogenicity	Genotoxicity Negative
		Carcinogenicity Skin Negative
	g) reproductive toxicity	No Observed Adverse Effect Level Oral Rat = 22.7 mg/kg

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

12.1. Toxicity

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

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

Propane-1,2-diol, propoxylated

CAS: 25322-69-4	a) Aquatic acute toxicity: LC50 Fish Danio rerio > 100 mg/L 96h
	a) Aquatic acute toxicity: EC50 Daphnia Daphnia magna = 105.8 mg/L 48h
	b) Aquatic chronic toxicity: NOEC Daphnia Daphnia magna = 10 mg/L
	a) Aquatic acute toxicity: EC50 Algae Desmodesmus subspicatus > 100 mg/L 72h
	a) Aquatic acute toxicity: NOEC Sludge activated sludge = 1000 mg/L 3h

Alcohols, C16-18 and C18-unsatd., ethoxylated

CAS: 68920-66-1	a) Aquatic acute toxicity: LC50 Fish Danio rerio = 108 mg/L 96h
	b) Aquatic chronic toxicity: EC20 Fish Pimephales promelas = 0.31 mg/L
	a) Aquatic acute toxicity: EL50 Daphnia Daphnia magna = 51 mg/L 48h
	b) Aquatic chronic toxicity: EC20 Daphnia Daphnia magna = 0.07 mg/L
	a) Aquatic acute toxicity: EL50 Algae Pseudokirchneriella subcapitata > 10 mg/L 72h
	c) Bacteria toxicity: EC10 Pseudomonas putida > 10 g/L
	d) Terrestrial toxicity: LC50 Worm Eisenia fetida > 1000 mg/kg

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7	a) Aquatic acute toxicity: LC50 Fish Lepomis macrochirus = 37.5 mg/L 96h
	b) Aquatic chronic toxicity: NOEC Fish Oncorhynchus mykiss = 21.5 mg/L
	a) Aquatic acute toxicity: EC50 Daphnia Daphnia magna = 1.4 mg/L 48h
	b) Aquatic chronic toxicity: NOEC Daphnia Daphnia magna = 0.27 mg/L
	a) Aquatic acute toxicity: NOEC Algae Skeletonema costatum = 0.08 mg/L 72h
	a) Aquatic acute toxicity: EC20 Sludge activated sludge = 2 mg/L
	d) Terrestrial toxicity: LC50 Worm Eisenia foetida > 500 mg/kg
	d) Terrestrial toxicity: EC50 soil microorganisms = 679 mg/kg

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

CAS: 2634-33-5	a) Aquatic acute toxicity: LC50 Fish Oncorynchus mykiss = 2.15 mg/L 96h
	a) Aquatic acute toxicity: EC50 Daphnia Daphnia magna = 2.9 mg/L 48h
	a) Aquatic acute toxicity: EC50 Algae green alga Selenastrum capricornutum freshwater algae = 110 µg/L

d) Terrestrial toxicity: EC50 Worm Eisenia fetida > 410.6 mg/kg

d) Terrestrial toxicity: EC10 soil microorganisms = 263.7 mg/kg

a) Aquatic acute toxicity: NOEC Sludge activated sludge 10.3 mg/L 3h

e) Plant toxicity: LC50 Triticum aestivum = 200 mg/kg

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 Oncorhynchus mykiss = 0.19 mg/L 96h

b) Aquatic chronic toxicity: NOEC Fish Danio rerio = 0.02 mg/L

a) Aquatic acute toxicity: LC50 Daphnia Daphnia magna = 0.16 mg/L 48h

b) Aquatic chronic toxicity: NOEC Daphnia Daphnia magna = 0.1 mg/L

a) Aquatic acute toxicity: EC50 Algae Skeletonema costatum = 0 mg/L 96h

a) Aquatic acute toxicity: EC50 Sludge activated sludge = 4.5 mg/L 3h

d) Terrestrial toxicity: LC50 Worm Eisenia fetida = 613 mg/kg

e) Plant toxicity: NOEC Trifolium pratense, Oryza sativa, Brassica napus = 1000 mg/L

12.2. Persistence and degradability

Propane-1,2-diol, propoxylated

CAS: 25322-69-4 Readily biodegradable Value: 100
Notes: %; OECD Guideline 301 F

Alcohols, C16-18 and C18-unsatd., ethoxylated

CAS: 68920-66-1 Readily biodegradable Test: CO2 production; Value: 99
Notes: 28days

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7 Readily biodegradable Notes: OECD guideline 301B

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

CAS: 2634-33-5 Non-readily biodegradable Test: CO2 production
Notes: OECD Guideline 301C

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

bronopol (INN); 2-bromo-2-nitropropane-1,3-diol

CAS: 52-51-7 Bioaccumulative Test: BCF - Bioconcentrantion factor

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

CAS: 2634-33-5 Bioaccumulative Test: BCF - Bioconcentrantion factor; Value: 6.62

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

CAS: 55965-84-9 Bioaccumulative Test: BCF - Bioconcentrantion factor; Value: 54
Notes: ≤ 54

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT or vPvB substances present in concentration >= 0.1%

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 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.

The product disposed of as such, pursuant to Regulation (EU) 1357/2014, must be classified as hazardous waste

A waste code according to the European List of Wastes (LoW) cannot be specified, due to dependence on the usage. Contact an authorized waste disposal service.

Properties of waste which render it hazardous (Annex III, Directive 2008/98/EC):

N.A.

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-Label: N/A

ADR - Hazard identification number: N/A

ADR-Special Provisions: N/A

ADR-Transport category (Tunnel restriction code): N/A

ADR Limited Quantities: N/A

ADR Excepted Quantities: N/A

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)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EU) n. 2020/878

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

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

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. 2023/707

Regulation (EU) n. 2023/1434 (ATP 19 CLP) Regulation (EU) n. 2023/1435 (ATP 20 CLP)

Regulation (EU) n. 2024/197 (ATP 21 CLP) Regulation (EU) n. 2024/2564 (ATP 22 CLP)

Regulation (EU) n. 2024/2865 Regulation (EU) n. 2025/1222 (ATP 23 CLP)

Regulation (EC) nr 648/2004 (Detergents).

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: 28, 75

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

None

Explosives precursors – Regulation 2019/1148

No substances listed

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

No substances listed

German Water Hazard Class.

NWG: Not hazardous for water

German Lagerklasse according to TRGS 510:

LGK 10

SVHC Substances:

No SVHC substances present in concentration >= 0.1%

REGULATION (EU) No 528/2012

The product is identified as an article treated pursuant to art. 58 of Regulation (EU) no. 528/2012 and subsequent amendments.

Substances included in Regulation (EU) n. 528/2012 (concerning the making available on the market and use of biocidal products): Nomenclature IUPAC: Mixture of 5-chloro-2-methyl-2H- isothiazol-3-one (EINECS 247-500-7) and 2-methyl-2H-isothiazol-3-one (EINECS 220-239-6) (Mixture of CMIT/MIT)

Nomenclature BPR: C(M)IT/MIT (3:1)

CAS number: 55965-84-9

Product-type 6: Preservatives for products during storage

Assessment status: Approved

Commission Implementing Regulation (EU) 2016/131

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.
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.
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/Oral	Acute Tox. 3	Acute toxicity (oral), Category 3
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
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
3.4.2/1A	Skin Sens. 1A	Skin Sensitisation, Category 1A
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
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

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.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

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

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

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.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

IC50: half maximal inhibitory concentration

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

IMDG: International Maritime Code for Dangerous Goods.

INCI: International Nomenclature of Cosmetic Ingredients.

IRCCS: Scientific Institute for Research, Hospitalization and Health Care

KAFH: Keep Away From Heat

KSt: Explosion coefficient.

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
NA: 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.
TWATLV: 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:

- Safety Data Sheet
- SECTION 1: Identification of the substance/mixture and of the company/undertaking
- SECTION 2: Hazards identification
- SECTION 3: Composition/information on ingredients
- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties
- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 15: Regulatory information
- SECTION 16: Other information