



Safety Data Sheet according to (EC) No 1907/2006 as amended

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UniBond Grout Reviver ice white new

SDS No. : 687093
V002.2

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

1.1. Product identifier

UniBond Grout Reviver ice white new

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

Intended use:

Joint colour

ua-productsafety.uk@henkel.com

For Safety Data Sheet updates please visit our website <https://mysds.henkel.com/index.html#/appSelection> or www.henkel-adhesives.com.

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 0 8701 906777 - For further general health & safety, technical and practical advice on this product, please call +44 (0) 1606 593933 or write to: Technical Services; Henkel Limited; Road 5; Winsford Industrial Estate; Winsford; Cheshire; CW7 3QY- Email: technical.services@henkel.co.uk

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Chronic hazards to the aquatic environment

H411 Toxic to aquatic life with long lasting effects.

Category 2

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Hazard statement:

H411 Toxic to aquatic life with long lasting effects.

Supplemental information	Contains: Isothiazolinone mixture 3:1 (CIT/MIT) May produce an allergic reaction.
Precautionary statement:	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children.
Precautionary statement: Prevention	P262 Do not get in eyes, on skin, or on clothing. P273 Avoid release to the environment.
Precautionary statement: Disposal	P501 Dispose of contents/container in accordance with national regulation.

2.3. Other hazards

None if used properly.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

Following substances are present in a concentration $\geq 0,1\%$ and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in concentration \geq the concentration limit that are assessed to be a PBT, vPvB or ED.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No. EC Number REACH-Reg No.	Concentration	Classification	Specific Conc. Limits, M-factors and ATEs	Add. Information
bronopol 52-51-7 200-143-0 01-2119980938-15	0,1- < 1 %	Acute Tox. 3, Inhalation, H331 Acute Tox. 4, Dermal, H312 Acute Tox. 3, Oral, H301 STOT SE 3, H335 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	M acute = 10 ===== inhalation:ATE = 0,5881 mg/l;dust/mist	
terbutryn 886-50-0 212-950-5	0,001- < 0,025 % (10 ppm- < 250 ppm)	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Acute Tox. 4, Oral, H302 Skin Sens. 1B, H317	Skin Sens. 1B; H317; C >= 3 % ===== M acute = 100 M chronic = 100 ===== oral:ATE = 1.000 mg/kg	
pyrithione zinc 13463-41-7 236-671-3 01-2119511196-46	0,001- < 0,01 % (10 ppm- < 100 ppm)	Repr. 1B, H360D Aquatic Chronic 1, H410 Eye Dam. 1, H318 STOT RE 1, H372 Acute Tox. 2, Inhalation, H330 Aquatic Acute 1, H400 Acute Tox. 3, Oral, H301	M acute = 1.000 M chronic = 10 ===== oral:ATE = 221 mg/kg inhalation:ATE = 0,14 mg/l;dust/mist	
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9 01-2120764691-48	0,0001- < 0,0015 % (1 ppm- < 15 ppm)	Acute Tox. 2, Inhalation, H330 Aquatic Chronic 1, H410 Acute Tox. 3, Oral, H301 Acute Tox. 2, Dermal, H310 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Skin Corr. 1C, H314	Eye Irrit. 2; H319; C 0,06 - < 0,6 % Skin Irrit. 2; H315; C 0,06 - < 0,6 % Eye Dam. 1; H318; C >= 0,6 % Skin Sens. 1A; H317; C >= 0,0015 % Skin Corr. 1C; H314; C >= 0,6 % ===== M acute = 100 M chronic = 100	

**For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.**

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of adverse health effects seek medical advice.

Inhalation:

Move to fresh air, consult doctor if complaint persists.

Skin contact:

Rinse with running water and soap. Skin care. Remove contaminated clothes immediately.

Eye contact:

Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remain (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

Ingestion:

Rinse mouth and throat. Drink 1-2 glasses of water. Seek medical advice.

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

No data available.

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

See section: Description of first aid measures

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media:**

carbon dioxide, foam, powder, water spray jet, fine water spray

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO) and carbon dioxide (CO₂) can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus.

Wear protective equipment.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Wear protective equipment.

Avoid contact with skin and eyes.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Remove mechanically.

Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Avoid skin and eye contact.

Hygiene measures:

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry place.

Do not store together with food or other consumables (coffee, tea, tobacco, etc.).

7.3. Specific end use(s)

Joint colour

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Calcium carbonate 471-34-1 [CALCIUM CARBONATE, INHALABLE DUST]		10	Time Weighted Average (TWA):		EH40 WEL
Calcium carbonate 471-34-1 [CALCIUM CARBONATE, RESPIRABLE DUST]		4	Time Weighted Average (TWA):		EH40 WEL
Calcium carbonate 471-34-1 [LIMESTONE, RESPIRABLE MARBLE, RESPIRABLE]		4	Time Weighted Average (TWA):		EH40 WEL
Calcium carbonate 471-34-1 [LIMESTONE, TOTAL INHALABLE MARBLE, TOTAL INHALABLE]		10	Time Weighted Average (TWA):		EH40 WEL
Calcium carbonate 471-34-1 [Dust, inhalable dust]		10	Time Weighted Average (TWA):		EH40 WEL
Calcium carbonate 471-34-1 [Dust, respirable dust]		4	Time Weighted Average (TWA):		EH40 WEL
Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE, RESPIRABLE]		4	Time Weighted Average (TWA):		EH40 WEL
Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE, TOTAL INHALABLE]		10	Time Weighted Average (TWA):		EH40 WEL
Limestone 1317-65-3 [CALCIUM CARBONATE, INHALABLE DUST]		10	Time Weighted Average (TWA):		EH40 WEL
Limestone 1317-65-3 [CALCIUM CARBONATE, RESPIRABLE DUST]		4	Time Weighted Average (TWA):		EH40 WEL
Limestone 1317-65-3 [LIMESTONE, RESPIRABLE MARBLE, RESPIRABLE]		4	Time Weighted Average (TWA):		EH40 WEL
Limestone 1317-65-3 [LIMESTONE, TOTAL INHALABLE MARBLE, TOTAL INHALABLE]		10	Time Weighted Average (TWA):		EH40 WEL
Talc (Mg ₃ H ₂ (SiO ₃) ₄) 14807-96-6 [TALC, RESPIRABLE DUST]		1	Time Weighted Average (TWA):		EH40 WEL

Occupational Exposure Limits

Valid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Calcium carbonate 471-34-1 [CALCIUM CARBONATE]		4	Time Weighted Average (TWA):		IR_OEL
Calcium carbonate 471-34-1 [CALCIUM CARBONATE]		10	Time Weighted Average (TWA):		IR_OEL

Calcium carbonate 471-34-1 [DUSTS NON-SPECIFIC]		4	Time Weighted Average (TWA):		IR_OEL
Calcium carbonate 471-34-1 [DUSTS NON-SPECIFIC]		10	Time Weighted Average (TWA):		IR_OEL
Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE]		10	Time Weighted Average (TWA):		IR_OEL
Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE]		4	Time Weighted Average (TWA):		IR_OEL
Limestone 1317-65-3 [CALCIUM CARBONATE]		4	Time Weighted Average (TWA):		IR_OEL
Limestone 1317-65-3 [CALCIUM CARBONATE]		10	Time Weighted Average (TWA):		IR_OEL
Talc (Mg ₃ H ₂ (SiO ₃) ₄) 14807-96-6 [TALC]		10	Time Weighted Average (TWA):		IR_OEL
Talc (Mg ₃ H ₂ (SiO ₃) ₄) 14807-96-6 [TALC]		0,8	Time Weighted Average (TWA):		IR_OEL

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
bronopol 52-51-7	aqua (freshwater)		0,01 mg/l				
bronopol 52-51-7	aqua (marine water)		0,0008 mg/l				
bronopol 52-51-7	aqua (intermittent releases)		0,0025 mg/l				
bronopol 52-51-7	sewage treatment plant (STP)		0,43 mg/l				
bronopol 52-51-7	sediment (freshwater)				0,041 mg/kg		
bronopol 52-51-7	sediment (marine water)				0,00328 mg/kg		
bronopol 52-51-7	Soil				0,5 mg/kg		
Pyrithione zinc 13463-41-7	sewage treatment plant (STP)		0,01 mg/l				
Pyrithione zinc 13463-41-7	sediment (freshwater)				0,009 mg/kg		
Pyrithione zinc 13463-41-7	sediment (marine water)				0,009 mg/kg		
Pyrithione zinc 13463-41-7	Soil				1,02 mg/kg		
Mixture, 3(2H)-Isothiazolone, 5-chloro-2- methyl-, mixt. with 2-methyl-3(2H)- isothiazolone 55965-84-9	aqua (freshwater)		0,00339 mg/l				
Mixture, 3(2H)-Isothiazolone, 5-chloro-2- methyl-, mixt. with 2-methyl-3(2H)- isothiazolone 55965-84-9	aqua (marine water)		0,00339 mg/l				
Mixture, 3(2H)-Isothiazolone, 5-chloro-2- methyl-, mixt. with 2-methyl-3(2H)- isothiazolone 55965-84-9	sewage treatment plant (STP)		0,23 mg/l				
Mixture, 3(2H)-Isothiazolone, 5-chloro-2- methyl-, mixt. with 2-methyl-3(2H)- isothiazolone 55965-84-9	sediment (freshwater)				0,027 mg/kg		
Mixture, 3(2H)-Isothiazolone, 5-chloro-2- methyl-, mixt. with 2-methyl-3(2H)- isothiazolone 55965-84-9	sediment (marine water)				0,027 mg/kg		
Mixture, 3(2H)-Isothiazolone, 5-chloro-2- methyl-, mixt. with 2-methyl-3(2H)- isothiazolone 55965-84-9	Soil				0,01 mg/kg		
Mixture, 3(2H)-Isothiazolone, 5-chloro-2- methyl-, mixt. with 2-methyl-3(2H)- isothiazolone 55965-84-9	aqua (intermittent releases)		0,00339 mg/l				

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
bronopol 52-51-7	Workers	dermal	Long term exposure - systemic effects		2 mg/kg	
bronopol 52-51-7	General population	dermal	Long term exposure - systemic effects		0,7 mg/kg	
bronopol 52-51-7	General population	oral	Long term exposure - systemic effects		0,18 mg/kg	
bronopol 52-51-7	Workers	inhalation	Long term exposure - systemic effects		3,5 mg/m ³	
bronopol 52-51-7	General population	inhalation	Long term exposure - systemic effects		0,6 mg/m ³	
bronopol 52-51-7	Workers	inhalation	Acute/short term exposure - systemic effects		10,5 mg/m ³	
bronopol 52-51-7	Workers	inhalation	Long term exposure - local effects		2,5 mg/m ³	
bronopol 52-51-7	Workers	inhalation	Acute/short term exposure - local effects		2,5 mg/m ³	
bronopol 52-51-7	Workers	dermal	Acute/short term exposure - systemic effects		6 mg/kg	
bronopol 52-51-7	Workers	dermal	Long term exposure - local effects		0,008 mg/cm ²	
bronopol 52-51-7	Workers	dermal	Acute/short term exposure - local effects		0,008 mg/cm ²	
bronopol 52-51-7	General population	dermal	Long term exposure - local effects		0,004 mg/cm ²	
bronopol 52-51-7	General population	dermal	Acute/short term exposure - local effects		0,004 mg/cm ²	
bronopol 52-51-7	General population	dermal	Acute/short term exposure - systemic effects		2,1 mg/kg	
bronopol 52-51-7	General population	inhalation	Long term exposure - local effects		0,6 mg/m ³	
bronopol 52-51-7	General population	inhalation	Acute/short term exposure - systemic effects		1,8 mg/m ³	
bronopol 52-51-7	General population	inhalation	Acute/short term exposure - local effects		0,6 mg/m ³	
bronopol 52-51-7	General population	oral	Acute/short term exposure - systemic effects		0,5 mg/kg	
Pyrrithione zinc 13463-41-7	Workers	dermal	Long term exposure - systemic effects		0,01 mg/kg	
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Workers	inhalation	Long term exposure - local effects		0,02 mg/m ³	
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	Workers	inhalation	Acute/short term exposure - local effects		0,04 mg/m ³	
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	General population	inhalation	Long term exposure - local effects		0,02 mg/m ³	
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone	General population	inhalation	Acute/short term exposure - local effects		0,04 mg/m ³	

isothiazolone 55965-84-9			effects			
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	General population	oral	Long term exposure - systemic effects		0,09 mg/kg	
Mixture, 3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone 55965-84-9	General population	oral	Acute/short term exposure - systemic effects		0,11 mg/kg	

Biological Exposure Indices:

None

8.2. Exposure controls:

Respiratory protection:

Ensure adequate ventilation.

Hand protection:

In the case of longer contact protective gloves made from nitrile rubber are recommended according to EN 374.

material thickness > 0.1 mm

Perforation time > 480 minutes

In the case of longer and repeated contact please note that in practice the penetration times may be considerably shorter than those determined according to EN 374. The protective gloves must always be checked for their suitability for use at the specific workplace (e.g. mechanical and thermal stress, product compatibility, antistatic effects, etc.). The gloves must be replaced immediately at the first signs of wear and tear. The information provided by the manufacturers and given in the relevant trade association regulations for industrial safety must always be observed. We recommend that a hand care plan is drawn up in cooperation with a glove manufacturer and the trade association in accordance with the local operating conditions.

Eye protection:

Goggles which can be tightly sealed.

Protective eye equipment should conform to EN166.

Skin protection:

Suitable protective clothing

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.

Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	liquid
Delivery form	paste
Colour	white
Odor	little intrinsic odour
pH (20 °C (68 °F))	8 - 9
Viscosity, dynamic (Brookfield; Instrument: RVT; speed of rotation: 20 min-1; Spindle No: 5)	19.600 cp Brookfield viscosity (LVT, RVT, HBT)
Density (20 °C (68 °F))	1,45 - 1,55 g/cm ³ no method

9.2. Other information

Other information not applicable for this product

SECTION 10: Stability and reactivity

10.1. Reactivity

Reaction with acids: production of heat and carbon dioxide.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

None if used for intended purpose.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

General toxicological information:

An allergic reaction cannot be excluded after repeated skin contact.

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

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
bronopol 52-51-7	LD50	193 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
terbutryn 886-50-0	LD50	1.000 - 1.470 mg/kg	rat	not specified
terbutryn 886-50-0	Acute toxicity estimate (ATE)	1.000 mg/kg		Expert judgement
pyrithione zinc 13463-41-7	Acute toxicity estimate (ATE)	221 mg/kg		Expert judgement
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	LD50	66 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
bronopol 52-51-7	LD50	1.600 mg/kg	rat	not specified
terbutryn 886-50-0	LD50	> 10.200 mg/kg	rabbit	not specified
pyrithione zinc 13463-41-7	LD50	> 2.000 mg/kg	rat	EPA OPP 81-2 (Acute Dermal Toxicity)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	LD50	87,12 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)

Acute inhalative toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
bronopol 52-51-7	LC50	> 0,588 mg/l	dust/mist	4 h	rat	not specified
bronopol 52-51-7	LC100	1,14 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)
bronopol 52-51-7	Acute toxicity estimate (ATE)	0,5881 mg/l	dust/mist	4 h		Expert judgement
terbutryn 886-50-0	LC50	> 8 mg/l	dust/mist	4 h	rat	not specified
pyrithione zinc 13463-41-7	Acute toxicity estimate (ATE)	0,14 mg/l	dust/mist	4 h		Expert judgement
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	LC50	0,171 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
bronopol 52-51-7	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
pyrithione zinc 13463-41-7	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	corrosive	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
bronopol 52-51-7	highly irritating		rabbit	Draize Test
pyrithione zinc 13463-41-7	Category 1 (irreversible effects on the eye)		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	Category 1 (irreversible effects on the eye)		rabbit	not specified

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
bronopol 52-51-7	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
terbutryn 886-50-0	sensitising		mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
pyrithione zinc 13463-41-7	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	sensitising	Mouse local lymphnode assay (LLNA)	mouse	not specified

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
bronopol 52-51-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		not specified
bronopol 52-51-7	positive	in vitro mammalian chromosome aberration test	with and without		not specified
bronopol 52-51-7	negative	mammalian cell gene mutation assay	with and without		not specified
pyrithione zinc 13463-41-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
pyrithione zinc 13463-41-7	positive	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
pyrithione zinc 13463-41-7	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	ambiguous	bacterial reverse mutation assay (e.g Ames test)	with and without		equivalent or similar to OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	positive	in vitro mammalian chromosome aberration test	with and without		EPA OPP 84-2 (Mutagenicity Testing)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	positive	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	negative	DNA damage and repair assay, unscheduled DNA synthesis in mammalian cells in vitro	not applicable		OECD Guideline 482 (Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells In Vitro)
bronopol 52-51-7	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
bronopol 52-51-7	negative	oral: gavage		rat	OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo)
pyrithione zinc 13463-41-7	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	negative	oral: gavage		mouse	OECD Guideline 475 (Mammalian Bone Marrow Chromosome Aberration Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	negative	oral: feed		Drosophila melanogaster	OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	negative	oral: gavage		rat	OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	negative	oral: gavage		rat	EPA OPP 84-2 (Mutagenicity Testing)

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	not carcinogenic	oral: drinking water	2 y daily	rat	male/female	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
bronopol 52-51-7	NOAEL P > 40 mg/kg NOAEL F1 > 40 mg/kg	One generation study	oral: gavage	rat	not specified
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	NOAEL P 30 ppm NOAEL F1 300 ppm NOAEL F2 300 ppm	Two generation study	oral: drinking water	rat	OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
bronopol 52-51-7	NOAEL 7 mg/kg	oral: drinking water	104 w daily	rat	not specified
pyrithione zinc 13463-41-7	NOAEL 0,5 mg/kg	oral: gavage	104 w daily	rat	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	NOAEL 16,3 mg/kg	oral: drinking water	90 d daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	NOAEL 0.34 mg/m3	inhalation: aerosol	90 d 6 h/d, 5 d/w	rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	NOAEL 2,625 mg/kg	dermal	90 d 6 h/d	rat	EPA OPP 82-3 (Subchronic Dermal Toxicity 90 Days)

Aspiration hazard:

No data available.

11.2 Information on other hazards

not applicable

SECTION 12: Ecological information

General ecological information:

Do not empty into drains, soil or bodies of water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
bronopol 52-51-7	LC50	41 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
bronopol 52-51-7	NOEC	21,5 mg/l	49 d	Oncorhynchus mykiss	OECD Guideline 210 (fish early lite stage toxicity test)
terbutryn 886-50-0	LC50	1,9 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
terbutryn 886-50-0	NOEC	0,073 mg/l	28 d	Pimephales promelas	OECD Guideline 210 (fish early lite stage toxicity test)
pyrithione zinc 13463-41-7	LC50	0,0026 mg/l	96 h	Pimephales promelas	EPA OPP 72-1 (Fish Acute Toxicity Test)
pyrithione zinc 13463-41-7	NOEC	0,00112 mg/l	32 d	Pimephales promelas	OECD Guideline 210 (fish early lite stage toxicity test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	LC50	0,22 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	NOEC	0,098 mg/l	28 d	Oncorhynchus mykiss	OECD Guideline 210 (fish early lite stage toxicity test)

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
bronopol 52-51-7	EC50	1,4 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
terbutryn 886-50-0	EC50	6,4 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
pyrithione zinc 13463-41-7	EC50	0,0063 mg/l	96 h	Americamysis bahia	EPA OPP 72-3 (Estuarine/Marine Fish, Mollusk, or Shrimp Acute Toxicity Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	EC50	0,12 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
bronopol 52-51-7	NOEC	0,27 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
terbutryn 886-50-0	NOEC	0,05 mg/l	21 day	Daphnia	OECD 211 (Daphnia magna, Reproduction Test)
pyrithione zinc 13463-41-7	NOEC	0,0022 mg/l	21 d	Daphnia magna	EPA OPP 72-4 (Fish Early Life-Stage/Aquatic Invert.Life-Cycle Studies)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	NOEC	0,0036 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
bronopol 52-51-7	EC50	0,37 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
bronopol 52-51-7	NOEC	0,1 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
terbutryn 886-50-0	EC50	0,0067 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
terbutryn 886-50-0	NOEC	0,0005 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
pyrithione zinc 13463-41-7	EC50	0,0006 mg/l	48 h	Skeletonema costatum	EPA OPP 123-3 (Algal Toxicity, Tiers I and II)
pyrithione zinc 13463-41-7	NOEC	0,00004 mg/l	48 h	Skeletonema costatum	EPA OPP 123-3 (Algal Toxicity, Tiers I and II)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	EC50	0,0052 mg/l	48 h	Skeletonema costatum	OECD Guideline 201 (Alga, Growth Inhibition Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	NOEC	0,00064 mg/l	48 h	Skeletonema costatum	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
bronopol 52-51-7	EC50	43 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
pyrithione zinc 13463-41-7	NOEC	0,1 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	EC20	0,97 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
bronopol 52-51-7	readily biodegradable	aerobic	> 70 - 80 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
bronopol 52-51-7	not inherently biodegradable	aerobic	50 %	45 d	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
terbutryn 886-50-0	not readily biodegradable.		0 %		OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
pyrithione zinc 13463-41-7	not readily biodegradable.	aerobic	39 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	inherently biodegradable	aerobic	100 %	28 d	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	readily biodegradable	aerobic	> 60 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

12.3. Bioaccumulative potential

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
pyrithione zinc 13463-41-7	8,28	30 d		Crassostrea virginica	OECD Guideline 305 E (Bioaccumulation: Flow-through Fish Test)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	3,6			calculation	QSAR (Quantitative Structure Activity Relationship)

12.4. Mobility in soil

Hazardous substances CAS-No.	LogPow	Temperature	Method
bronopol 52-51-7	0,22	24 °C	EU Method A.8 (Partition Coefficient)
terbutryn 886-50-0	3,19		OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
pyrithione zinc 13463-41-7	0,9	25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	> -0,71 - 0,75	20 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
bronopol 52-51-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
pyrithione zinc 13463-41-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Isothiazolinone mixture 3:1 (CIT/MIT) 55965-84-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Endocrine disrupting properties

not applicable

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Dispose of waste and residues in accordance with local authority requirements.

Disposal of uncleaned packages:

Use packages for recycling only when totally empty.

Waste code

170903

SECTION 14: Transport information
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14.1. UN number

ADR	3082
RID	3082
ADN	3082
IMDG	3082
IATA	3082

14.2. UN proper shipping name

ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bromonitro propanediol, Terbutryn)
RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bromonitro propanediol, Terbutryn)
ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bromonitro propanediol, Terbutryn)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bromonitro propanediol, Terbutryn)
IATA	Environmentally hazardous substance, liquid, n.o.s. (bromonitro propanediol, Terbutryn)

14.3. Transport hazard class(es)

ADR	9
RID	9
ADN	9
IMDG	9
IATA	9

14.4. Packing group

ADR	III
RID	III
ADN	III
IMDG	III
IATA	III

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	Marine pollutant
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable Tunnelcode:
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

The transport classifications in this section apply generally to packed and bulk goods alike. For containers with a net volume of no more than 5 L for liquid substances or a net mass of no more than 5 kg for solid substances per individual or inner package, the exemptions SP 375 (ADR), A197 (IATA), 2.10.2.7 (IMDG) may be applied, which can result in a deviation from the transport classification for packed goods.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009):	Not applicable
Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):	Not applicable
Persistent organic pollutants (Regulation (EU) 2019/1021):	Not applicable

VOC Paints and Varnishes (EU):

Regulatory Basis:	Directive 2004/42/EC
Product (sub)category:	A(l) Decorative effect coatings
max. VOC content:	30,00 g/l
max. VOC content:	30,00 g/l

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H301 Toxic if swallowed.
 H302 Harmful if swallowed.
 H310 Fatal in contact with skin.
 H312 Harmful in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H330 Fatal if inhaled.
 H331 Toxic if inhaled.
 H335 May cause respiratory irritation.
 H360D May damage the unborn child.
 H372 Causes damage to organs through prolonged or repeated exposure.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.
 H411 Toxic to aquatic life with long lasting effects.

ED:	Substance identified as having endocrine disrupting properties
EU OEL:	Substance with a Union workplace exposure limit
EU EXPLD 1:	Substance listed in Annex I, Reg (EC) No. 2019/1148
EU EXPLD 2	Substance listed in Annex II, Reg (EC) No. 2019/1148
SVHC:	Substance of very high concern (REACH Candidate List)
PBT:	Substance fulfilling persistent, bioaccumulative and toxic criteria
PBT/vPvB:	Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria
vPvB:	Substance fulfilling very persistent and very bioaccumulative criteria

Further information:

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