



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

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Ceresit CL 51

SDS No. : 390200
V005.0

Revision: 23.07.2024

printing date: 19.05.2025

Replaces version from: 13.06.2023

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

1.1. Product identifier

Ceresit CL 51

UFI: PFIT-TVE0-K20A-RWD4

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

Intended use:

insulating material

1.3. Details of the supplier of the safety data sheet

Henkel Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

SDSinfo.Adhesive@henkel.com

For Safety Data Sheet updates please visit our website www.mysds.henkel.com 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):

||| Skin sensitizer

Category 1

||| H317 May cause an allergic skin reaction.

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Contains

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

Signal word:	Warning
Hazard statement:	H317 May cause an allergic skin reaction.
Supplemental information	EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist. Contains: Isothiazolinone mixture (C(M)IT/MIT (3:1)) May produce an allergic reaction.
Precautionary statement:	P102 Keep out of reach of children. P101 If medical advice is needed, have product container or label at hand.
Precautionary statement: Prevention	P280 Wear protective gloves.
Precautionary statement: Response	P302+P352 IF ON SKIN: Wash with plenty of soap and water.
Precautionary statement: Disposal	P501 Dispose of contents/container in accordance with national regulation.

2.3. Other hazards

None if used properly.

Following substances are present in a concentration \geq the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):

This mixture does not contain any substances in a concentration \geq the concentration limit for depiction in Section 3 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
Titanium dioxide 13463-67-7 236-675-5 01-2119489379-17	1- < 5 %	Carc. 2, Inhalation, H351		
1,2-Benzisothiazol-3(2H)-one 2634-33-5 220-120-9 01-2120761540-60	0,036- < 0,1 % (0,36 ‰ - < 1 ‰)	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Acute Tox. 4, Oral, H302 Skin Irrit. 2, H315 Skin Sens. 1A, H317 Eye Dam. 1, H318 Acute Tox. 2, Inhalation, H330	Skin Sens. 1A; H317; C >= 0,036 % ===== M acute = 1 M chronic = 1 ===== oral:ATE = 450 mg/kg inhalation:ATE = 0,21 mg/l;dust/mist	
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2 223-296-5 01-2119493385-28	0,001- < 0,01 % (10 ppm- < 100 ppm)	Acute Tox. 4, Oral, H302 Acute Tox. 3, Dermal, H311 Skin Irrit. 2, Dermal, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Acute Tox. 3, Inhalation, H331 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	M acute = 100 ===== dermal:ATE = 790 mg/kg oral:ATE = 500 mg/kg inhalation:ATE = 0,5 mg/l;dust/mist	
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9 01-2120764691-48	0,0001- < 0,0015 % (1 ppm- < 15 ppm)	Aquatic Chronic 1, H410 Skin Corr. 1C, H314 Acute Tox. 2, Dermal, H310 Acute Tox. 3, Oral, H301 Eye Dam. 1, H318 Acute Tox. 2, Inhalation, H330 Aquatic Acute 1, H400 Skin Sens. 1A, H317	Skin Irrit. 2; H315; C 0,06 - < 0,6 % Skin Corr. 1C; H314; C >= 0,6 % Eye Irrit. 2; H319; C 0,06 - < 0,6 % Eye Dam. 1; H318; C >= 0,6 % Skin Sens. 1A; H317; C >= 0,0015 % ===== M acute = 100 M chronic = 100	

**If no ATE values are displayed, please refer to LD/LC50 values in Section 11.
For full text of the H - statements and other abbreviations see section 16 "Other information".**

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. Apply replenishing cream. Change all contaminated clothing. If necessary, see a dermatologist.

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

May cause an allergic skin reaction.

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.

Danger of slipping on spilled product.

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 with liquid-absorbing material (sand, peat, sawdust).

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 frost-free.

Store in a cool, dry place.

Store in sealed original container.

Avoid moisture.

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

7.3. Specific end use(s)

insulating material

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
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
Dolomite 16389-88-1 [DUST, INHALABLE DUST]		10	Time Weighted Average (TWA):		EH40 WEL
Dolomite 16389-88-1 [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

Occupational Exposure Limits

Valid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
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
Dolomite 16389-88-1 [DUSTS NON-SPECIFIC]		4	Time Weighted Average (TWA):		IR_OEL
Dolomite 16389-88-1 [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

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
1,2-Benzisothiazol-3(2H)-one 2634-33-5	aqua (freshwater)		0,00403 mg/l				
1,2-Benzisothiazol-3(2H)-one 2634-33-5	aqua (marine water)		0,000403 mg/l				
1,2-Benzisothiazol-3(2H)-one 2634-33-5	Freshwater - intermittent		0,0011 mg/l				
1,2-Benzisothiazol-3(2H)-one 2634-33-5	sewage treatment plant (STP)		1,03 mg/l				
1,2-Benzisothiazol-3(2H)-one 2634-33-5	sediment (freshwater)				0,0499 mg/kg		
1,2-Benzisothiazol-3(2H)-one 2634-33-5	sediment (marine water)				0,00499 mg/kg		
1,2-Benzisothiazol-3(2H)-one 2634-33-5	Soil				3 mg/kg		
1,2-Benzisothiazol-3(2H)-one 2634-33-5	Marine water - intermittent		0,000110 mg/l				
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (3:1) 55965-84-9	aqua (freshwater)		0,00339 mg/l				
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (3:1) 55965-84-9	aqua (marine water)		0,00339 mg/l				
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (3:1) 55965-84-9	sewage treatment plant (STP)		0,23 mg/l				
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (3:1) 55965-84-9	sediment (freshwater)				0,027 mg/kg		
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (3:1) 55965-84-9	sediment (marine water)				0,027 mg/kg		
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (3:1) 55965-84-9	Soil				0,01 mg/kg		
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (3:1) 55965-84-9	Freshwater - intermittent		0,00339 mg/l				
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (3:1) 55965-84-9	Marine water - intermittent		0,00339 mg/l				

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Titanium dioxide 13463-67-7	Workers	inhalation	Long term exposure - local effects		0,17 mg/m ³	
Titanium dioxide 13463-67-7	General population	inhalation	Long term exposure - local effects		0,028 mg/m ³	
1,2-Benzisothiazol-3(2H)-one 2634-33-5	Workers	inhalation	Long term exposure - systemic effects		6,81 mg/m ³	
1,2-Benzisothiazol-3(2H)-one 2634-33-5	Workers	dermal	Long term exposure - systemic effects		0,966 mg/kg	
1,2-Benzisothiazol-3(2H)-one 2634-33-5	General population	inhalation	Long term exposure - systemic effects		1,2 mg/m ³	
1,2-Benzisothiazol-3(2H)-one 2634-33-5	General population	dermal	Long term exposure - systemic effects		0,345 mg/kg	
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (3:1) 55965-84-9	Workers	inhalation	Long term exposure - local effects		0,02 mg/m ³	
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (3:1) 55965-84-9	Workers	inhalation	Acute/short term exposure - local effects		0,04 mg/m ³	
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (3:1) 55965-84-9	General population	inhalation	Long term exposure - local effects		0,02 mg/m ³	
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (3:1) 55965-84-9	General population	inhalation	Acute/short term exposure - local effects		0,04 mg/m ³	
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (3:1) 55965-84-9	General population	oral	Long term exposure - systemic effects		0,09 mg/kg	
3(2H)-Isothiazolone, 5-chloro-2-methyl-, mixt. with 2-methyl-3(2H)-isothiazolone (3:1) 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 > 30 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

Delivery form	liquid
Colour	grey
Odor	specific
Physical state	liquid
Melting point	Not applicable, Product is a liquid
Solidification temperature	0 °C (32 °F) Aqueous solution
Initial boiling point	>= 100 °C (>= 212 °F)
Flammability	The product is not flammable.
Explosive limits	Not applicable, Aqueous solution
Flash point	Not applicable, The product is not flammable.
Auto-ignition temperature	Not applicable, Aqueous solution
Decomposition temperature	Not applicable, Substance/mixture is not self-reactive, no organic peroxide and does not decompose under foreseen conditions of use
pH	7,5 - 9,5
(20 °C (68 °F); Conc.: 100 % product; Solvent: Water)	
Viscosity (kinematic)	5.237,7 mm ² /s
(23 °C (73 °F);)	
Solubility (qualitative)	Miscible
(20 °C (68 °F); Solvent: Water)	
Partition coefficient: n-octanol/water	Currently under determination
Vapour pressure	2,34 kPa Values referring to water
(20 °C (68 °F))	
Density	1,395 - 1,705 kg/dm ³
(20 °C (68 °F))	
Relative vapour density:	> 1
(20 °C)	
Particle characteristics	Not applicable Product is a liquid

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

None if used properly.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

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

Acute oral toxicity:

Hazardous substances CAS-No.	Value type	Value	Species	Method
Titanium dioxide 13463-67-7	LD50	> 5.000 mg/kg	rat	OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
1,2-Benzisothiazol-3(2H)-one 2634-33-5	Acute toxicity estimate (ATE)	450 mg/kg		Expert judgement
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	Acute toxicity estimate (ATE)	500 mg/kg		Expert judgement
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	LD50	66 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)

Acute dermal toxicity:

Hazardous substances CAS-No.	Value type	Value	Species	Method
Titanium dioxide 13463-67-7	LD50	> 10.000 mg/kg	rabbit	not specified
1,2-Benzisothiazol-3(2H)-one 2634-33-5	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	Acute toxicity estimate (ATE)	790 mg/kg		Expert judgement
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	LD50	87,12 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)

Acute inhalative toxicity:

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
Titanium dioxide 13463-67-7	LC50	> 6,82 mg/l	dust	4 h	rat	not specified
1,2-Benzisothiazol-3(2H)- one 2634-33-5	Acute toxicity estimate (ATE)	0,21 mg/l	dust/mist			Expert judgement
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	Acute toxicity estimate (ATE)	0,5 mg/l	dust/mist	4 h		Expert judgement
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	LC50	0,171 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation:

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Titanium dioxide 13463-67-7	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
1,2-Benzisothiazol-3(2H)- one 2634-33-5	moderately irritating	4 h	rabbit	EPA OPP 81-5 (Acute Dermal Irritation)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	corrosive	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Titanium dioxide 13463-67-7	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
1,2-Benzisothiazol-3(2H)- one 2634-33-5	corrosive	3 h	rabbit	EPA OPP 81-4 (Acute Eye Irritation)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	Category 1 (irreversible effects on the eye)		rabbit	not specified

Respiratory or skin sensitization:

Hazardous substances CAS-No.	Result	Test type	Species	Method
Titanium dioxide 13463-67-7	not sensitising	Mouse local lymphnode assay (LLNA)	mouse	equivalent or similar to OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Titanium dioxide 13463-67-7	not sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
1,2-Benzisothiazol-3(2H)- one 2634-33-5	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
1,2-Benzisothiazol-3(2H)- one 2634-33-5	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	sensitising	Guinea pig maximisation test	guinea pig	EU Method B.6 (Skin Sensitisation)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	sensitising	Mouse local lymphnode assay (LLNA)	mouse	not specified

Germ cell mutagenicity:

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Titanium dioxide 13463-67-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Titanium dioxide 13463-67-7	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Titanium dioxide 13463-67-7	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Titanium dioxide 13463-67-7	negative	in vitro mammalian cell micronucleus test	without		equivalent or similar to OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
1,2-Benzisothiazol-3(2H)- one 2634-33-5	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
1,2-Benzisothiazol-3(2H)- one 2634-33-5	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
1,2-Benzisothiazol-3(2H)- one 2634-33-5	positive without metabolic activation	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	positive	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 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 (C(M)IT/MIT (3:1)) 55965-84-9	positive	in vitro mammalian chromosome aberration test	with and without		EPA OPP 84-2 (Mutagenicity Testing)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	positive	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 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)
Titanium dioxide 13463-67-7	negative	oral: gavage		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
1,2-Benzisothiazol-3(2H)- one 2634-33-5	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
1,2-Benzisothiazol-3(2H)- one 2634-33-5	negative	oral: unspecified		rat	OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	negative	oral: gavage		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1))	negative	oral: gavage		mouse	OECD Guideline 475 (Mammalian Bone Marrow

55965-84-9					Chromosome Aberration Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	negative	oral: feed		Drosophila melanogaster	OECD Guideline 477 (Genetic Toxicology: Sex-linked Recessive Lethal Test in Drosophila melanogaster)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	negative	oral: gavage		rat	OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	negative	oral: gavage		rat	EPA OPP 84-2 (Mutagenicity Testing)

Carcinogenicity

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
Titanium dioxide 13463-67-7	not carcinogenic	oral: feed	103 w daily	rat	male/female	not specified
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	not carcinogenic	oral: gavage	104 w daily	rat	male/female	EPA OPP 83-2 (Carcinogenicity)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	not carcinogenic	oral: drinking water	2 y daily	rat	male/female	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Reproductive toxicity:

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
Titanium dioxide 13463-67-7	NOAEL P >= 1.000 mg/kg NOAEL F1 >= 1.000 mg/kg	one- generation study	oral: feed	rat	OECD Guideline 443 (Extended One-Generation Reproductive Toxicity Study)
1,2-Benzisothiazol-3(2H)- one 2634-33-5	NOAEL P 112 mg/kg NOAEL F1 56,6 mg/kg NOAEL F2 56,6 mg/kg	Two generation study	oral: feed	rat	EPA OPPTS 870.3800 (Reproduction and Fertility Effects)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	NOAEL P 0,7 mg/kg NOAEL F1 0,7 mg/kg	Two generation study	oral: gavage	rat	EPA OPPTS 870.3800 (Reproduction and Fertility Effects)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 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:

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
Titanium dioxide 13463-67-7	NOAEL > 1.000 mg/kg	oral: gavage	92 d daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
1,2-Benzisothiazol-3(2H)- one 2634-33-5	NOAEL 150 mg/kg	oral: gavage	28 days daily	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
1,2-Benzisothiazol-3(2H)- one 2634-33-5	NOAEL 69 mg/kg	oral: feed	90 days daily	rat	EPA OPP 82-1 (90-Day Oral Toxicity)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	NOAEL 0,5 mg/kg	oral: gavage	90 d	rat	EPA OTS 798.2650 (90- Day Oral Toxicity in Rodents)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	NOAEL 5 mg/kg	dermal	90 d daily	rat	EPA OPP 82-3 (Subchronic Dermal Toxicity 90 Days)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	NOAEL 0,0011 mg/l	inhalation: aerosol	90 d 6 h/d 5 d/w	rat	EPA OPP 82-4 (90-Day Inhalation Toxicity)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 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 (C(M)IT/MIT (3:1)) 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 (C(M)IT/MIT (3:1)) 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 table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Titanium dioxide 13463-67-7	LC50	Toxicity > Water solubility	48 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
1,2-Benzisothiazol-3(2H)-one 2634-33-5	LC50	2,15 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
1,2-Benzisothiazol-3(2H)-one 2634-33-5	NOEC	0,21 mg/l	30 d	Oncorhynchus mykiss	OECD Guideline 215 (Fish, Juvenile Growth Test)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	LC50	0,007 mg/l	96 h	Oncorhynchus mykiss	EPA OPP 72-1 (Fish Acute Toxicity Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	LC50	0,22 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	NOEC	0,098 mg/l	28 d	Oncorhynchus mykiss	OECD Guideline 210 (fish early lite stage toxicity test)

Toxicity (aquatic invertebrates):

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Titanium dioxide 13463-67-7	EC50	Toxicity > Water solubility	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
1,2-Benzisothiazol-3(2H)-one 2634-33-5	EC50	2,9 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	EC50	0,022 mg/l	48 h	Daphnia magna	EPA OPP 72-2 (Aquatic Invertebrate Acute Toxicity Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	EC50	0,12 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity (aquatic invertebrates):

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Titanium dioxide 13463-67-7	NOEC	Toxicity > Water solubility	21 d	Daphnia magna	OECD Guideline 202 (Daphnia sp. Chronic Immobilisation Test)
1,2-Benzisothiazol-3(2H)-one 2634-33-5	NOEC	1,2 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	NOEC	0,0036 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Toxicity (Algae):

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Titanium dioxide 13463-67-7	EC50	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Titanium dioxide 13463-67-7	NOEC	Toxicity > Water solubility	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,2-Benzisothiazol-3(2H)-one 2634-33-5	EC50	0,1087 mg/l	24 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,2-Benzisothiazol-3(2H)-one 2634-33-5	EC10	0,0264 mg/l	24 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	EC50	0,46 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	NOEC	0,08 mg/l	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	EC50	0,0052 mg/l	72 h	Skeletonema costatum	OECD Guideline 201 (Alga, Growth Inhibition Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	NOEC	0,00064 mg/l	48 h	Skeletonema costatum	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity (microorganisms):

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
Titanium dioxide 13463-67-7	EC0	Toxicity > Water solubility	24 h	Pseudomonas fluorescens	DIN 38412, part 8 (Pseudomonas Zellvermehrungshemm- Test)
1,2-Benzisothiazol-3(2H)-one 2634-33-5	EC50	23 mg/l	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	EC0	3,2 mg/l	30 min	Pseudomonas putida	DIN 38412, part 27 (Bacterial oxygen consumption test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 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

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
1,2-Benzisothiazol-3(2H)-one 2634-33-5	not readily biodegradable.	aerobic	42,1 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	readily biodegradable	aerobic	> 60 %	28 d	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	inherently biodegradable	aerobic	89 - 92 %	28 d	EU Method C.9 (Biodegradation: Zahn-Wellens Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	inherently biodegradable	aerobic	100 %	28 d	OECD Guideline 302 B (Inherent biodegradability: Zahn- Wellens/EMPA Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	readily biodegradable	aerobic	> 60 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

12.3. Bioaccumulative potential

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
1,2-Benzisothiazol-3(2H)-one 2634-33-5	6,62	56 d		not specified	other guideline:
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	< 100			not specified	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 55965-84-9	3,6			calculation	QSAR (Quantitative Structure Activity Relationship)

12.4. Mobility in soil

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	LogPow	Temperature	Method
1,2-Benzisothiazol-3(2H)-one 2634-33-5	0,7	20 °C	EU Method A.8 (Partition Coefficient)
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 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

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	PBT / vPvB
Titanium dioxide 13463-67-7	According to Annex XIII to Regulation (EC) No 1907/2006, a PBT and vPvB assessment shall not be conducted for inorganic substances.
1,2-Benzisothiazol-3(2H)-one 2634-33-5	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Pyridine-2-thiol 1-oxide, sodium salt 3811-73-2	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Isothiazolinone mixture (C(M)IT/MIT (3:1)) 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

080119

SECTION 14: Transport information

- 14.1. UN number or ID number**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.2. UN proper shipping name**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.3. Transport hazard class(es)**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.4. Packing group**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.5. Environmental hazards**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.6. Special precautions for user**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 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(h) Binding primers
Phase I (from 1.1.2007):	50 g/l
Phase II (from 1.1.2010):	30 g/l
max. VOC content:	2 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.
- 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.
- H331 Toxic if inhaled.
- H351 Suspected of causing cancer.
- 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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