Aro-Bond 559 (Aro-Bond DX5947)

Ureka Global Ltd

Chemwatch Hazard Alert Code: **2**

Version No: **1.1**
Safety data sheet according to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

Issue Date: **27/03/2024**
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S.REACH.GB.EN

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

1.1. Product Identifier

Product name	Aro-Bond 559 (Aro-Bond DX5947)
Chemical Name	Not Applicable
Chemical formula	Not Applicable
Other means of identification	UFI:HKFH-V0E0-000C-8GAS

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

Sectors of Use	SU22 Professional uses SU3 Industrial uses
Relevant identified uses	Adhesive
Uses advised against	No specific uses advised against are identified.

1.3. Details of the manufacturer or supplier of the safety data sheet

Registered company name	**Ureka Global Ltd**
Address	Unit 5 Decoypool Road, St Modwen Park, Newport, NP19 4RG United Kingdom
Telephone	+44 (0)117 971 1364
Fax	Not Available
Website	www.thenamethatsticks.com
Email	sales@thenamethatsticks.com

1.4. Emergency telephone number

Association / Organisation	**Not Available**
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available

SECTION 2 Hazards identification

2.1. Classification of the substance or mixture

Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567 [1]	H319 - Serious Eye Damage/Eye Irritation Category 2
Legend:	***1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567***

2.2. Label elements

Hazard pictogram(s)	
Signal word	**Warning**

Hazard statement(s)

H319	Causes serious eye irritation.

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Supplementary statement(s)

Not Applicable

Precautionary statement(s) Prevention

P280	Wear protective gloves, protective clothing, eye protection and face protection.
P264	Wash all exposed external body areas thoroughly after handling.

Precautionary statement(s) Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

Material contains butyl glycolate, 1,2-benzisothiazoline-3-one, 2-bromo-2-nitropropan-1,3-diol, 5-chloro-2-methyl-4-isothiazolin-3-one.

2.3. Other hazards

Ingestion may produce health damage*.

2-bromo-2-nitropropan-1,3-diol	Listed in the Europe Regulation (EC) No 1907/2006 - Annex XVII (Restrictions may apply)

SECTION 3 Composition / information on ingredients

3.1.Substances

See 'Composition on ingredients' in Section 3.2

3.2.Mixtures

1. CAS No 2.EC No 3.Index No 4.REACH No	% [weight]	Name	Classified according to GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567	SCL / M-Factor	Nanoform Particle Characteristics
1. 7397-62-8 2.230-991-7 3.Not Available 4.Not Available	2.5-<10	butyl glycolate	Acute Toxicity (Oral) Category 4, Serious Eye Damage/Eye Irritation Category 1; H302, H318 [1]	Not Available	Not Available
1. 2634-33-5 2.220-120-9 3.613-088-00-6 4.Not Available	0.0015-<0.05	1,2-benzisothiazoline-3-one	Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 1, Hazardous to the Aquatic Environment Acute Hazard Category 1; H302, H315, H317, H318, H400 [2]	Skin Sens. 1; H317: C ≥ 0,05 %	Not Available
1. 52-51-7 2.200-143-0 3.603-085-00-8 4.Not Available	0.0015-<0.05	2-bromo-2-nitropropan-1,3-diol	Acute Toxicity (Oral) Category 4, Acute Toxicity (Dermal) Category 4, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 1, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3 , Hazardous to the Aquatic Environment Acute Hazard Category 1; H302, H312, H315, H318, H335, H400 [2]	M=10	Not Available
1. 55965-84-9 2.247-500-7 3.613-167-00-5 4.Not Available	<0.0015	5-chloro-2-methyl-4-isothiazolin-3-one	Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 2, Skin Corrosion/Irritation Category 1C, Sensitisation (Skin) Category 1A, Serious Eye Damage/Eye Irritation Category 1, Acute Toxicity (Inhalation) Category 2, Hazardous to the Aquatic Environment Acute Hazard Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 1; H301, H310, H314, H317, H318, H330, H400, H410 [2]	Skin Corr. 1C; H314: C ≥ 0,6 % | Skin Irrit. 2; H315: 0,06 % ≤ C < 0,6 % | Eye Dam. 1; H318: C ≥ 0,6 % | Eye Irrit. 2; H319: 0,06 % ≤ C < 0,6 % | Skin Sens. 1A; H317: C ≥ 0,0015 % | M=100 | M=100	Not Available
1. 55965-84-9 2.Not Available 3.613-167-00-5 4.Not Available	<0.0015	isothiazolinones, mixed	Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 2, Skin Corrosion/Irritation Category 1C, Sensitisation (Skin) Category 1A, Serious Eye Damage/Eye Irritation Category 1, Acute Toxicity (Inhalation) Category 2, Hazardous to the Aquatic Environment Acute Hazard Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 1; H301, H310, H314, H317, H318, H330, H400, H410 [2]	Skin Corr. 1C; H314: C ≥ 0,6 % | Skin Irrit. 2; H315: 0,06 % ≤ C < 0,6 % | Eye Dam. 1; H318: C ≥ 0,6 % | Eye Irrit. 2; H319: 0,06 % ≤ C < 0,6 % | Skin Sens. 1A; H317: C ≥ 0,0015 % | M=100 | M=100	Not Available
1. 2682-20-4 2.220-239-6 3.613-326-00-9 4.Not Available	<0.0015	2-methyl-4-isothiazolin-3-one	Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Skin Corrosion/Irritation Category 1B, Sensitisation (Skin) Category 1A, Serious Eye Damage/Eye Irritation Category 1, Acute Toxicity (Inhalation) Category 2, Hazardous to the Aquatic Environment Acute Hazard Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 1; H301, H311, H314, H317, H318, H330, H400, H410 [2]	Skin Sens. 1A; H317: C ≥ 0,0015 % | M=10 | M=1	Not Available

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Legend:	***1. Classified by Chemwatch; 2. Classification drawn from GB-CLP Regulation, UK SI 2019/720 and UK SI 2020/1567; 3. Classification drawn from C&L; * EU IOELVs available; [e] Substance identified as having endocrine disrupting properties***

SECTION 4 First aid measures

4.1. Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ▸ Wash out immediately with fresh running water. ▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▸ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: ▸ Flush skin and hair with running water (and soap if available). ▸ Seek medical attention in event of irritation.
Inhalation	▸ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▸ Other measures are usually unnecessary.
Ingestion	▸ If swallowed do **NOT** induce vomiting. ▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ▸ Observe the patient carefully. ▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ▸ Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11

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

Treat symptomatically.

SECTION 5 Firefighting measures

5.1. Extinguishing media

▸ There is no restriction on the type of extinguisher which may be used.
▸ Use extinguishing media suitable for surrounding area.

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.

5.3. Advice for firefighters

Fire Fighting	▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear breathing apparatus plus protective gloves in the event of a fire. ▸ Prevent, by any means available, spillage from entering drains or water courses.
Fire/Explosion Hazard	▸ Non combustible. ▸ Not considered a significant fire risk, however containers may burn. May emit poisonous fumes. May emit corrosive fumes.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See section 8

6.2. Environmental precautions

See section 12

6.3. Methods and material for containment and cleaning up

Minor Spills	▸ Clean up all spills immediately. ▸ Avoid breathing vapours and contact with skin and eyes. ▸ Control personal contact with the substance, by using protective equipment.
Major Spills	▸ Absorb or contain isothiazolinone liquid spills with sand, earth, inert material or vermiculite. ▸ The absorbent (and surface soil to a depth sufficient to remove all of the biocide) should be shovelled into a drum and treated with an 11% solution of sodium metabisulfite ($Na_2S_2O_5$) or sodium bisulfite ($NaHSO_3$), or 12% sodium sulfite (Na_2SO_3) and 8% hydrochloric acid (HCl). ▸ Glutathione has also been used to inactivate the isothiazolinones.

6.4. Reference to other sections

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Safe handling	▸ Avoid all personal contact, including inhalation. ▸ Wear protective clothing when risk of exposure occurs. ▸ Use in a well-ventilated area.
Fire and explosion protection	See section 5

Continued...

Other information	

7.2. Conditions for safe storage, including any incompatibilities

Suitable container	▸ Polyethylene or polypropylene container. ▸ Packing as recommended by manufacturer. ▸ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	Formaldehyde: ▸ is a strong reducing agent ▸ may polymerise in air unless properly inhibited (usually with methanol up to 15%) and stored at controlled temperatures ▸ will polymerize with active organic material such as phenol ▸ reacts violently with strong oxidisers, hydrogen peroxide, potassium permanganate, acrylonitrile, caustics (sodium hydroxide, yielding formic acid and flammable hydrogen), magnesium carbonate, nitromethane, nitrogen oxides (especially a elevated temperatures), peroxyformic acid ▸ is incompatible with strong acids (hydrochloric acid forms carcinogenic bis(chloromethyl)ether*), amines, ammonia, aniline, bisulfides, gelatin, iodine, magnesite, phenol, some monomers, tannins, salts of copper, iron, silver. ▸ acid catalysis can produce impurities: methylal, methyl formate Aqueous solutions of formaldehyde: ▸ slowly oxidise in air to produce formic acid ▸ attack carbon steel Concentrated solutions containing formaldehyde are: ▸ unstable, both oxidising slowly to form formic acid and polymerising; in dilute aqueous solutions formaldehyde appears as monomeric hydrate (methylene glycol) - the more concentrated the solution the more polyoxymethylene glycol occurs as oligomers and polymers (methanol and amine-containing compounds inhibit polymer formation) ▸ readily subject to polymerisation, at room temperature, in the presence of air and moisture, to form paraformaldehyde (8-100 units of formaldehyde), a solid mixture of linear polyoxymethylene glycols containing 90-99% formaldehyde; a cyclic trimer, trioxane (CH_2O_3), may also form Flammable and/or toxic gases are generated by the combination of aldehydes with azo, diazo compounds, dithiocarbamates, nitrides, and strong reducing agents *The empirical equation may be used to determine the concentration of bis(chloromethyl)ether (BCME) formed by reaction with HCl: log(BCME)ppb = -2.25 + 0.67• log(HCHO) ppm + 0.77• log(HCl)ppm Assume values for formaldehyde, in air, of 1 ppm and for HCl of 5 ppm, resulting BCME concentration, in air, would be 0.02 ppb. None known
Hazard categories in accordance with Regulation (EC) No 2012/18/EU (Seveso III)	Not Available
Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of	Not Available

7.3. Specific end use(s)

See section 1.2

SECTION 8 Exposure controls / personal protection

8.1. Control parameters

Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
butyl glycolate	Dermal 10 mg/kg bw/day (Systemic, Chronic) Inhalation 7.05 mg/m³ (Systemic, Chronic) ***Dermal 25 mg/kg bw/day (Systemic, Chronic) **** ***Inhalation 1.74 mg/m³ (Systemic, Chronic) ****	0.023 mg/L (Water (Fresh)) 0.231 mg/L (Water - Intermittent release) 0.002 mg/L (Water (Marine)) 0.094 mg/kg sediment dw (Sediment (Fresh Water)) 0.009 mg/kg sediment dw (Sediment (Marine)) 0.005 mg/kg soil dw (Soil) 3.71 mg/L (STP)
1,2-benzisothiazoline-3-one	Dermal 0.966 mg/kg bw/day (Systemic, Chronic) Inhalation 6.81 mg/m³ (Systemic, Chronic) ***Dermal 0.345 mg/kg bw/day (Systemic, Chronic) **** ***Inhalation 1.2 mg/m³ (Systemic, Chronic) ****	4.03 µg/L (Water (Fresh)) 1.1 µg/L (Water - Intermittent release) 0.403 µg/L (Water (Marine)) 49.9 µg/kg sediment dw (Sediment (Fresh Water)) 4.99 µg/kg sediment dw (Sediment (Marine)) 3 mg/kg soil dw (Soil) 1.03 mg/L (STP)
2-bromo-2-nitropropan-1,3-diol	Dermal 2 mg/kg bw/day (Systemic, Chronic) Inhalation 3.5 mg/m³ (Systemic, Chronic) Dermal 8 µg/cm² (Local, Chronic) Inhalation 2.5 mg/m³ (Local, Chronic) Dermal 6 mg/kg bw/day (Systemic, Acute) Inhalation 10.5 mg/m³ (Systemic, Acute) Dermal 8 µg/cm² (Local, Acute) Inhalation 2.5 mg/m³ (Local, Acute) ***Dermal 0.7 mg/kg bw/day (Systemic, Chronic) **** ***Inhalation 0.6 mg/m³ (Systemic, Chronic) **** ***Oral 0.18 mg/kg bw/day (Systemic, Chronic) **** ***Dermal 4 µg/cm² (Local, Chronic) **** ***Inhalation 0.6 mg/m³ (Local, Chronic) **** ***Dermal 2.1 mg/kg bw/day (Systemic, Acute) **** ***Inhalation 1.8 mg/m³ (Systemic, Acute) **** ***Oral 0.5 mg/kg bw/day (Systemic, Acute) **** ***Dermal 4 µg/cm² (Local, Acute) **** ***Inhalation 0.6 mg/m³ (Local, Acute) ****	0.001 mg/L (Water (Fresh)) 0 mg/L (Water - Intermittent release) 0.001 mg/L (Water (Marine)) 0.021 mg/kg sediment dw (Sediment (Fresh Water)) 0.009 mg/kg sediment dw (Sediment (Marine)) 0.21 mg/kg soil dw (Soil) 0.43 mg/L (STP)
5-chloro-2-methyl-4-isothiazolin-3-one	Inhalation 0.02 mg/m³ (Local, Chronic) Inhalation 0.04 mg/m³ (Local, Acute) ***Oral 0.09 mg/kg bw/day (Systemic, Chronic) **** ***Inhalation 0.02 mg/m³ (Local, Chronic) ****	3.39 µg/L (Water (Fresh)) 3.39 µg/L (Water - Intermittent release) 3.39 µg/L (Water (Marine)) 0.027 mg/kg sediment dw (Sediment (Fresh Water)) 0.027 mg/kg sediment dw (Sediment (Marine))

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Ingredient	DNELs Exposure Pattern Worker	PNECs Compartment
	Oral 0.11 mg/kg bw/day (Systemic, Acute) * ***Inhalation 0.04 mg/m³ (Local, Acute) ****	0.01 mg/kg soil dw (Soil) 0.23 mg/L (STP)
isothiazolinones, mixed	Inhalation 0.02 mg/m³ (Local, Chronic) Inhalation 0.04 mg/m³ (Local, Acute) ***Oral 0.09 mg/kg bw/day (Systemic, Chronic) **** ***Inhalation 0.02 mg/m³ (Local, Chronic) **** ***Oral 0.11 mg/kg bw/day (Systemic, Acute) **** ***Inhalation 0.04 mg/m³ (Local, Acute) ****	3.39 µg/L (Water (Fresh)) 3.39 µg/L (Water - Intermittent release) 3.39 µg/L (Water (Marine)) 0.027 mg/kg sediment dw (Sediment (Fresh Water)) 0.027 mg/kg sediment dw (Sediment (Marine)) 0.01 mg/kg soil dw (Soil) 0.23 mg/L (STP)
2-methyl-4-isothiazolin-3-one	Inhalation 0.021 mg/m³ (Local, Chronic) Inhalation 0.043 mg/m³ (Local, Acute) ***Oral 0.027 mg/kg bw/day (Systemic, Chronic) **** ***Inhalation 0.021 mg/m³ (Local, Chronic) **** ***Oral 0.053 mg/kg bw/day (Systemic, Acute) **** ***Inhalation 0.043 mg/m³ (Local, Acute) ****	3.39 µg/L (Water (Fresh)) 3.39 µg/L (Water - Intermittent release) 3.39 µg/L (Water (Marine)) 0.047 mg/kg soil dw (Soil) 0.23 mg/L (STP)

* Values for General Population

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

Not Applicable

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
5-chloro-2-methyl-4-isothiazolin-3-one	0.6 mg/m3	6.6 mg/m3	40 mg/m3

Ingredient	Original IDLH	Revised IDLH
butyl glycolate	Not Available	Not Available
1,2-benzisothiazoline-3-one	Not Available	Not Available
2-bromo-2-nitropropan-1,3-diol	Not Available	Not Available
5-chloro-2-methyl-4-isothiazolin-3-one	Not Available	Not Available
isothiazolinones, mixed	Not Available	Not Available
2-methyl-4-isothiazolin-3-one	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
butyl glycolate	E	≤ 0.1 ppm
1,2-benzisothiazoline-3-one	E	≤ 0.01 mg/m³
2-bromo-2-nitropropan-1,3-diol	E	≤ 0.01 mg/m³
5-chloro-2-methyl-4-isothiazolin-3-one	E	≤ 0.01 mg/m³
isothiazolinones, mixed	E	≤ 0.1 ppm
2-methyl-4-isothiazolin-3-one	D	> 0.01 to ≤ 0.1 mg/m³
Notes:	***Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.***	

8.2. Exposure controls

8.2.1. Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk.
8.2.2. Individual protection measures, such as personal protective equipment	
Eye and face protection	‣ Safety glasses with side shields. ‣ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent] ‣ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants.
Skin protection	See Hand protection below
Hands/feet protection	The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. ‣ Butyl rubber gloves · Nitrile rubber gloves (Note: Nitric acid penetrates nitrile gloves in a few minutes.) ‣ Wear chemical protective gloves, e.g. PVC. ‣ Wear safety footwear or safety gumboots, e.g. Rubber
Body protection	See Other protection below

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Other protection	▸ Overalls. ▸ P.V.C apron. ▸ Barrier cream.

Respiratory protection

Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	AK-AUS / Class1 P2	-
up to 50	1000	-	AK-AUS / Class 1 P2
up to 50	5000	Airline *	-
up to 100	5000	-	AK-2 P2
up to 100	10000	-	AK-3 P2
100+			Airline**

* - Continuous Flow ** - Continuous-flow or positive pressure demand
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

8.2.3. Environmental exposure controls

See section 12

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Not Available

Physical state	Liquid	**Relative density (Water = 1)**	1.12
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	229
pH (as supplied)	Not Available	**Decomposition temperature (°C)**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	105	**Molecular weight (g/mol)**	Not Available
Flash point (°C)	Not Available	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Available	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	12.18	**Gas group**	Not Available
Solubility in water	Not Applicable	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	1.123	**VOC g/L**	Not Available
Nanoform Solubility	Not Available	**Nanoform Particle Characteristics**	Not Available
Particle Size	Not Available		

9.2. Other information

Not Available

SECTION 10 Stability and reactivity

10.1.Reactivity	See section 7.2
10.2. Chemical stability	▸ Unstable in the presence of incompatible materials. ▸ Product is considered stable. ▸ Hazardous polymerisation will not occur.
10.3. Possibility of hazardous reactions	See section 7.2
10.4. Conditions to avoid	See section 7.2
10.5. Incompatible materials	See section 7.2
10.6. Hazardous decomposition products	See section 5.3

SECTION 11 Toxicological information

11.1. Information on toxicological effects

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Inhaled	The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Ingestion	Accidental ingestion of the material may be damaging to the health of the individual. Taken by mouth, isothiazolinones have moderate to high toxicity. The major signs of toxicity are severe stomach irritation, lethargy, and inco-ordination.
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. A 0.5% solution of 1,2-benzisothiazoline-3-one (BIT) is irritating to the skin. Even 0.05% can cause allergy, according to patch tests, with reddening of the skin. Provocation tests with BIT showed the material to be sensitizing. Solutions of isothiazolinones may be irritating or even damaging to the skin, depending on concentration. A concentration of over 0.1% can irritate, and over 0.5% can cause severe irritation. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	This material can cause eye irritation and damage in some persons. Solutions containing isothiazolinones may damage the mucous membranes and cornea. Animal testing showed very low concentrations (under 0.1%) did not cause irritation, while higher levels (3-5.5%) produced severe irritation and damage to the eye.
Chronic	Ample evidence from experiments exists that there is a suspicion this material directly reduces fertility. In animal testing, 1,2-benzisothiazoline-3-one (BIT) did not cause toxicity to the embryo or birth defects. The material does not cause mutations or an increase in cancer. Mild anaemia, reduction in food intake and changes in organ weights did occur in a long-term study. The isothiazolinones are known contact sensitisers. Sensitisation is more likely with the chlorinated species as opposed to the non-chlorinated species.

Aro-Bond 559 (Aro-Bond DX5947)	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
butyl glycolate	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: 3200 mg/kg[2]	Eye (rabbit): 100 mg/24 h - moderate *
	Oral (Rat) LD50: 980 mg/kg[2]	Eye: adverse effect observed (irritating)[1]
		Skin: adverse effect observed (irritating)[1]
		Skin: no adverse effect observed (not irritating)[1]
1,2-benzisothiazoline-3-one	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >2000 mg/kg[1]	Eye: adverse effect observed (irreversible damage)[1]
	Oral (Rat) LD50: 454 mg/kg[1]	Skin: no adverse effect observed (not irritating)[1]
2-bromo-2-nitropropan-1,3-diol	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: ~1600 mg/kg[1]	Eye (rabbit): 5 mg
	Inhalation (Rat) LC50: >0.12<1.14 mg/l4h[1]	Skin (human): 10 mg moderate
	Oral (Rat) LD50: 180 mg/kg[2]	Skin (rabbit): 500 mg/24h mild
		Skin (rabbit): 80 mg moderate
5-chloro-2-methyl-4-isothiazolin-3-one	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >1008 mg/kg[2]	Eye: adverse effect observed (irreversible damage)[1]
	Inhalation (Rat) LC50: 1.23 mg/l4h[2]	Skin: adverse effect observed (corrosive)[1]
	Oral (Rat) LD50: 53 mg/kg[2]	Skin: adverse effect observed (irritating)[1]
isothiazolinones, mixed	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >1008 mg/kg[1]	Eye: adverse effect observed (irreversible damage)[1]
	Inhalation (Rat) LC50: 0.171 mg/l4h[1]	Skin: adverse effect observed (corrosive)[1]
	Oral (Rat) LD50: 53 mg/kg[2]	Skin: adverse effect observed (irritating)[1]
2-methyl-4-isothiazolin-3-one	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: 242 mg/kg[1]	Eye: adverse effect observed (irreversible damage)[1]
	Inhalation (Rat) LC50: 0.1 mg/l4h[1]	Skin: adverse effect observed (corrosive)[1]
	Oral (Rat) LD50: 120 mg/kg[1]	
Legend:	***1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances***	

BUTYL GLYCOLATE	* Aldrich ** Demchem SDS
1,2-BENZISOTHIAZOLINE-3-ONE	The predominant fate of the thiazole ring is oxidative ring scission catalysed by cytochrome P450 (CYP) and formation of the corresponding alpha-dicarbonyl metabolites and thioamide derivatives. The well-established toxicity associated with thioamides and thioureas has led to the speculation that thiazole toxicity is attributed to ring scission yielding the corresponding thioamide metabolite. Ring opening has also been observed in benzothiazoles. **Acute toxicity** data show that 1,2-benzisothiazoline-3-one (BIT) is moderately toxic by the oral and dermal routes but that this chemical is a severe eye irritant. Irritation to the skin from acute data show only mild skin irritation , but repeated dermal application indicated a more

Continued...

	significant skin irritation response. The neurotoxicity observed in the rat acute oral toxicity study (piloerection and upward curvature of the spine at 300 mg/kg and above; decreased activity, prostration, decreased abdominal muscle tone, reduced righting reflex, and decreased rate and depth of breathing at 900 mg/kg) and the acute dermal toxicity study (upward curvature of the spine was observed in increased incidence, but this was absent after day 5 post-dose at a dose of 2000 mg/kg) were felt to be at exposures in excess of those expected from the use pattern of this pesticide and that such effects would not be observed at estimated exposure doses.
2-BROMO-2-NITROPROPAN-1,3-DIOL	Chemical with the aliphatic nitro group (-C-NO2) have been added to a list of DNA-reactive subgroups recognised by the National Toxicological Program (NTP, U.S. Dept Health and Human Services) for possible carcinogenic activity.
5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE	Considered to be the major sensitiser in Kathon CG (1)
2-METHYL-4-ISOTHIAZOLIN-3-ONE	Considered to be a minor sensitiser in Kathon CG (1) **NOTE:** Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA.
1,2-BENZISOTHIAZOLINE-3-ONE & 5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE & ISOTHIAZOLINONES, MIXED & 2-METHYL-4-ISOTHIAZOLIN-3-ONE	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. In light of potential adverse effects, and to ensure a harmonised risk assessment and management, the EU regulatory framework for biocides has been established with the objective of ensuring a high level of protection of human and animal health and the environment. To this aim, it is required that risk assessment of biocidal products is carried out before they can be placed on the market. A central element in the risk assessment of the biocidal products are the utilization instructions that defines the dosage, application method and amount of applications and thus the exposure of humans and the environment to the biocidal substance. Humans may be exposed to biocidal products in different ways in both occupational and domestic settings. No significant acute toxicological data identified in literature search.
2-BROMO-2-NITROPROPAN-1,3-DIOL & 5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE & ISOTHIAZOLINONES, MIXED & 2-METHYL-4-ISOTHIAZOLIN-3-ONE	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Formaldehyde generators (releasers) are often used as preservatives. The maximum authorised concentration of free formaldehyde is 0.2% and must be labelled with the warning sign "contains formaldehyde" where the concentration exceeds 0.05%.The use of formaldehyde-releasing preservatives ensures that the level of free formaldehyde in the products is always low but sufficient to inhibit microbial growth - it disrupts metabolism to cause death of the organism. However there is a concern that formaldehyde generators can produce amines capable of causing cancers (nitrosamines) when used in formulations containing amines. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.
5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE & 2-METHYL-4-ISOTHIAZOLIN-3-ONE	(1). Bruze etal - Contact Dermatitis 20: 219-39, 1989 Based on laboratory and animal testing, exposure to the material may result in irreversible effects and mutations in humans.
5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE & ISOTHIAZOLINONES, MIXED & 2-METHYL-4-ISOTHIAZOLIN-3-ONE	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Acute Toxicity	✗	**Carcinogenicity**	✗
Skin Irritation/Corrosion	✗	**Reproductivity**	✗
Serious Eye Damage/Irritation	✓	**STOT - Single Exposure**	✗
Respiratory or Skin sensitisation	✗	**STOT - Repeated Exposure**	✗
Mutagenicity	✗	**Aspiration Hazard**	✗

Legend: ✗ ***– Data either not available or does not fill the criteria for classification***
✓ ***– Data available to make classification***

11.2 Information on other hazards

11.2.1. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

11.2.2. Other information

See Section 11.1

SECTION 12 Ecological information

12.1. Toxicity

Aro-Bond 559 (Aro-Bond DX5947)

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

butyl glycolate

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	48h	Crustacea	>89.2mg/l	2
EC10(ECx)	168h	Algae or other aquatic plants	15.7mg/l	2
LC50	96h	Fish	23.1mg/l	2

1,2-benzisothiazoline-3-one

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	48h	Crustacea	0.097mg/L	4
EC50	72h	Algae or other aquatic plants	0.07mg/L	2
LC50	96h	Fish	0.067-0.29mg/L	4

Continued...

	NOEC(ECx)	72h	Algae or other aquatic plants	0.04mg/L	2

2-bromo-2-nitropropan-1,3-diol

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	48h	Crustacea	1.1-3.52mg/L	4
EC50	96h	Algae or other aquatic plants	0.02-0.025mg/L	4
EC50	72h	Algae or other aquatic plants	0.026mg/l	2
EC10(ECx)	72h	Algae or other aquatic plants	0.013mg/l	2
LC50	96h	Fish	10.274-14.454mg/L	4

5-chloro-2-methyl-4-isothiazolin-3-one

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	48h	Crustacea	4.71mg/l	1
EC50	96h	Algae or other aquatic plants	0.03-0.13mg/L	4
EC50	72h	Algae or other aquatic plants	0.018-0.026mg/L	4
LC50	96h	Fish	0.13-0.31mg/L	4
NOEC(ECx)	504h	Crustacea	0.172mg/l	1

isothiazolinones, mixed

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	48h	Crustacea	0.007mg/l	2
EC50	96h	Algae or other aquatic plants	0.036mg/L	2
EC50	72h	Algae or other aquatic plants	0.006mg/L	2
NOEC(ECx)	48h	Algae or other aquatic plants	<0.001mg/L	2
LC50	96h	Fish	0.129mg/l	2

2-methyl-4-isothiazolin-3-one

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	48h	Crustacea	0.189-0.257mg/L	4
EC50	96h	Algae or other aquatic plants	0.061mg/L	2
EC50	72h	Algae or other aquatic plants	0.057mg/L	2
LC50	96h	Fish	0.081-0.122mg/L	4
NOEC(ECx)	96h	Algae or other aquatic plants	0.01mg/l	2

Legend: ***Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data***

Environmental Fate: Isothiazolinones are antimicrobials used to control bacteria, fungi, and for wood preservation and antifouling agents. They are frequently used in personal care products such as shampoos and other hair care products, as well as certain paint formulations. The most common isothiazolinone combinations are 5-chloro-2-methyl-4-isothiazolin-3-one, (CMI), and 2-methyl-4-isothiazolin-3-one, (MI).
For 2-bromo-2-nitropropan-1,3-diol (Bronopol)
Environmental fate:
One hydrolysis study indicates that bronopol appears to hydrolyse slowly at acidic or neutral pH conditions. Bronopol decomposes in aqueous solution on exposure to light. Increases in temperature increase decomposition.
DO NOT discharge into sewer or waterways.

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
butyl glycolate	LOW	LOW
2-bromo-2-nitropropan-1,3-diol	LOW	LOW
5-chloro-2-methyl-4-isothiazolin-3-one	HIGH	HIGH
2-methyl-4-isothiazolin-3-one	HIGH	HIGH

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
butyl glycolate	LOW (LogKOW = 0.3816)
2-bromo-2-nitropropan-1,3-diol	LOW (LogKOW = -0.6408)
5-chloro-2-methyl-4-isothiazolin-3-one	LOW (LogKOW = 0.0444)
2-methyl-4-isothiazolin-3-one	LOW (LogKOW = -0.8767)

12.4. Mobility in soil

Ingredient	Mobility
butyl glycolate	HIGH (Log KOC = 1.219)
2-bromo-2-nitropropan-1,3-diol	HIGH (Log KOC = 1)
5-chloro-2-methyl-4-isothiazolin-3-one	LOW (Log KOC = 45.15)

Continued...

Ingredient	Mobility
2-methyl-4-isothiazolin-3-one	LOW (Log KOC = 27.88)

12.5. Results of PBT and vPvB assessment

	P	B	T
Relevant available data	Not Available	Not Available	Not Available
PBT	✗	✗	✗
vPvB	✗	✗	✗

PBT Criteria fulfilled?	No
vPvB	No

12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties were found in the current literature.

12.7. Other adverse effects

One or more ingredients within this SDS has the potential of causing ozone depletion and/or photochemical ozone creation.

SECTION 13 Disposal considerations

13.1. Waste treatment methods

Product / Packaging disposal	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. ▸ **DO NOT** allow wash water from cleaning or process equipment to enter drains. ▸ It may be necessary to collect all wash water for treatment before disposal. ▸ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▸ Recycle wherever possible. ▸ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. ▸ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material).
Waste treatment options	Not Available
Sewage disposal options	Not Available

SECTION 14 Transport information

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number or ID number**	Not Applicable
14.2. **UN proper shipping name**	Not Applicable
14.3. **Transport hazard class(es)**	Class: Not Applicable Subsidiary Hazard: Not Applicable
14.4. **Packing group**	Not Applicable
14.5. **Environmental hazard**	Not Applicable
14.6. **Special precautions for user**	Hazard identification (Kemler): Not Applicable Classification code: Not Applicable Hazard Label: Not Applicable Special provisions: Not Applicable Limited quantity: Not Applicable Tunnel Restriction Code: Not Applicable

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number**	Not Applicable
14.2. **UN proper shipping name**	Not Applicable
14.3. **Transport hazard class(es)**	ICAO/IATA Class: Not Applicable ICAO / IATA Subsidiary Hazard: Not Applicable ERG Code: Not Applicable
14.4. **Packing group**	Not Applicable
14.5. **Environmental hazard**	Not Applicable
14.6. **Special precautions for user**	Special provisions: Not Applicable

Continued...

Cargo Only Packing Instructions	Not Applicable
Cargo Only Maximum Qty / Pack	Not Applicable
Passenger and Cargo Packing Instructions	Not Applicable
Passenger and Cargo Maximum Qty / Pack	Not Applicable
Passenger and Cargo Limited Quantity Packing Instructions	Not Applicable
Passenger and Cargo Limited Maximum Qty / Pack	Not Applicable

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number**	Not Applicable
14.2. **UN proper shipping name**	Not Applicable
14.3. **Transport hazard class(es)**	IMDG Class: Not Applicable IMDG Subsidiary Hazard: Not Applicable
14.4. **Packing group**	Not Applicable
14.5 **Environmental hazard**	Not Applicable
14.6. **Special precautions for user**	EMS Number: Not Applicable Special provisions: Not Applicable Limited Quantities: Not Applicable

Inland waterways transport (ADN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.1. **UN number**	Not Applicable
14.2. **UN proper shipping name**	Not Applicable
14.3. **Transport hazard class(es)**	Not Applicable | Not Applicable
14.4. **Packing group**	Not Applicable
14.5. **Environmental hazard**	Not Applicable
14.6. **Special precautions for user**	Classification code: Not Applicable Special provisions: Not Applicable Limited quantity: Not Applicable Equipment required: Not Applicable Fire cones number: Not Applicable

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
butyl glycolate	Not Available
1,2-benzisothiazoline-3-one	Not Available
2-bromo-2-nitropropan-1,3-diol	Not Available
5-chloro-2-methyl-4-isothiazolin-3-one	Not Available
isothiazolinones, mixed	Not Available
2-methyl-4-isothiazolin-3-one	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
butyl glycolate	Not Available
1,2-benzisothiazoline-3-one	Not Available
2-bromo-2-nitropropan-1,3-diol	Not Available
5-chloro-2-methyl-4-isothiazolin-3-one	Not Available
isothiazolinones, mixed	Not Available
2-methyl-4-isothiazolin-3-one	Not Available

SECTION 15 Regulatory information

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

butyl glycolate is found on the following regulatory lists

Not Applicable

1,2-benzisothiazoline-3-one is found on the following regulatory lists

Great Britain GB Biocidal Active Substances
Great Britain GB mandatory classification and labelling (GB MCL) technical reports

Continued...

Great Britain GB mandatory classification and labelling list (GB MCL)

2-bromo-2-nitropropan-1,3-diol is found on the following regulatory lists

Great Britain GB Biocidal Active Substances
Great Britain GB mandatory classification and labelling list (GB MCL)

5-chloro-2-methyl-4-isothiazolin-3-one is found on the following regulatory lists

Great Britain GB Biocidal Active Substances
Great Britain GB mandatory classification and labelling list (GB MCL)

isothiazolinones, mixed is found on the following regulatory lists

Great Britain GB Biocidal Active Substances
Great Britain GB mandatory classification and labelling list (GB MCL)

2-methyl-4-isothiazolin-3-one is found on the following regulatory lists

Great Britain GB Biocidal Active Substances
Great Britain GB mandatory classification and labelling list (GB MCL)

Additional Regulatory Information

Not Applicable

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : Directives 98/24/EC, - 92/85/EEC, - 94/33/EC, - 2008/98/EC, - 2010/75/EU; Commission Regulation (EU) 2020/878; Regulation (EC) No 1272/2008 as updated through ATPs.

Information according to 2012/18/EU (Seveso III):

Seveso Category	Not Available

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

ECHA SUMMARY

Ingredient	CAS number	Index No	ECHA Dossier
butyl glycolate	7397-62-8	Not Available	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Eye Dam. 1	GHS05; Dgr	H318
2	Eye Dam. 1; Repr. 2; STOT SE 3	GHS08; GHS05; Dgr	H318; H361; H336

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
1,2-benzisothiazoline-3-one	2634-33-5	613-088-00-6	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Acute Tox. 4; Skin Irrit. 2; Skin Sens. 1; Eye Dam. 1; Aquatic Acute 1	GHS09; GHS05; Dgr	H302; H315; H317; H318; H400
2	Acute Tox. 4; Skin Irrit. 2; Skin Sens. 1; Eye Dam. 1; Aquatic Acute 1; Acute Tox. 2; Aquatic Chronic 1	GHS09; GHS05; Dgr; GHS06; GHS08	H302; H315; H317; H318; H400; H410; H330

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
2-bromo-2-nitropropan-1,3-diol	52-51-7	603-085-00-8	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Acute Tox. 4; Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; STOT SE 3; Aquatic Acute 1	GHS09; GHS05; Dgr	H302; H312; H315; H318; H335; H400
2	Acute Tox. 3; Skin Irrit. 2; Eye Dam. 1; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 1; Flam. Sol. 2; Self-react. C; Acute Tox. 2; Acute Tox. 2	GHS05; GHS09; GHS06; Dgr; GHS02	H301; H315; H318; H335; H400; H410; H228; H242; H310; H330

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
5-chloro-2-methyl-4-isothiazolin-3-one	55965-84-9	613-167-00-5	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Acute Tox. 2; Acute Tox. 2; Skin Corr. 1B; Skin Sens. 1; Eye Dam. 1; Acute Tox. 2; Aquatic Acute 1	GHS08; GHS09; GHS06; Dgr	H300; H310; H314; H317; H318; H330; H400
2	Acute Tox. 2; Acute Tox. 2; Skin Corr. 1B; Skin Sens. 1; Eye Dam. 1; Acute Tox. 2; Aquatic Acute 1; STOT SE 3; Aquatic Chronic 1; Flam. Liq. 3; STOT SE 1; Resp. Sens. 1	GHS08; GHS09; GHS06; Dgr; GHS05; GHS02	H300; H310; H314; H317; H318; H330; H400; H335; H410; H226; H334; H370
1	Acute Tox. 3; Acute Tox. 3; Skin Corr. 1B; Skin Sens. 1; Acute Tox. 3; Aquatic Acute 1; Aquatic Chronic 1	GHS05; GHS09; GHS06; Dgr	H301; H311; H314; H317; H331; H410
2	Acute Tox. 3; Skin Corr. 1B; Skin Sens. 1; Aquatic Acute 1; Aquatic Chronic 1; Eye Dam. 1; Acute Tox. 2; Acute Tox. 2; STOT SE 3; Met.	GHS05; GHS09; GHS06; Dgr; GHS08	H301; H314; H317; H410; H318; H400; H310; H330; H335; H290;

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Continued...

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
	Corr. 1		H334

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
isothiazolinones, mixed	55965-84-9	613-167-00-5	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Acute Tox. 3; Acute Tox. 3; Skin Corr. 1B; Skin Sens. 1; Acute Tox. 3; Aquatic Acute 1; Aquatic Chronic 1	GHS05; GHS09; GHS06; Dgr	H301; H311; H314; H317; H331; H410
2	Acute Tox. 3; Skin Corr. 1B; Skin Sens. 1; Aquatic Acute 1; Aquatic Chronic 1; Eye Dam. 1; Acute Tox. 2; Acute Tox. 2; STOT SE 3; Met. Corr. 1	GHS05; GHS09; GHS06; Dgr; GHS08	H301; H314; H317; H410; H318; H400; H310; H330; H335; H290; H334

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

Ingredient	CAS number	Index No	ECHA Dossier
2-methyl-4-isothiazolin-3-one	2682-20-4	613-326-00-9	Not Available

Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)	Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Acute Tox. 3; Acute Tox. 3; Skin Corr. 1B; Skin Sens. 1; Eye Dam. 1; STOT SE 3; Aquatic Acute 1	GHS09; GHS05; GHS06; Dgr	H301; H311; H314; H317; H318; H335; H400
2	Skin Corr. 1B; Skin Sens. 1A; Acute Tox. 2; Aquatic Acute 1; Aquatic Chronic 1; Eye Dam. 1; STOT SE 3; STOT RE 2; Acute Tox. 2; Acute Tox. 2	GHS09; GHS05; GHS06; Dgr; GHS08	H314; H317; H330; H410; H318; H335; H400; H373; H304; H300; H310; H351

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	No (isothiazolinones, mixed)
Canada - DSL	Yes
Canada - NDSL	No (butyl glycolate; 1,2-benzisothiazoline-3-one; 2-bromo-2-nitropropan-1,3-diol; 5-chloro-2-methyl-4-isothiazolin-3-one; isothiazolinones, mixed; 2-methyl-4-isothiazolin-3-one)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (isothiazolinones, mixed)
Japan - ENCS	No (isothiazolinones, mixed)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	No (isothiazolinones, mixed)
Taiwan - TCSI	Yes
Mexico - INSQ	No (isothiazolinones, mixed)
Vietnam - NCI	Yes
Russia - FBEPH	No (butyl glycolate)
Legend:	***Yes = All CAS declared ingredients are on the inventory*** ***No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.***

SECTION 16 Other information

Revision Date	27/03/2024
Initial Date	27/03/2024

Full text Risk and Hazard codes

H226	Flammable liquid and vapour.
H228	Flammable solid.
H242	Heating may cause a fire.
H290	May be corrosive to metals.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H310	Fatal in contact with skin.
H311	Toxic 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.

Continued...

H318	Causes serious eye damage.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H370	Causes damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:
EN 166 Personal eye-protection
EN 340 Protective clothing
EN 374 Protective gloves against chemicals and micro-organisms
EN 13832 Footwear protecting against chemicals
EN 133 Respiratory protective devices

Definitions and abbreviations

- PC—TWA: Permissible Concentration-Time Weighted Average
- PC—STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit。
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration

- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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

Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	Classification Procedure
Serious Eye Damage/Eye Irritation Category 2, H319	Expert judgement

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