

Safety Data Sheet

According to (EC) No. 1907/2006

Day of issue: 29. April 2019

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

1.1. Product identifier

Buffers & Stabilizers

Effect Diluent – Low, Cat. No. 5070

Effect Diluent - Medium, Cat. No. 5080

Effect Diluent - High, Cat. No. 5090

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

For research and analysis. Restricted to professional users.

1.3. Details of the supplier of the safety data sheet

See below

Responsible person for the safety data sheet (e-mail): altox@altox.dk

1.4. Emergency telephone number

UK NHS: Dial 111 or 0845 4647

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

CLP (1272/2008): None

2.2. Label elements

EUH208: Contains CMIT/MIT. May produce an allergic reaction.

EUH210: Safety data sheet available on request.

2.3. Other hazards

None known

SECTION 3: Composition/information on ingredients**3.2. Mixtures**

% w/w	Substance Name	CAS-no.	EC-no.	Index-no.	REACH reg.-no.	Classification
<10	Ethane 1,2-diol	107-21-1	203-473-3	603-027-00-1	01-2119456816-28	Acute Tox. 4;H302
<15 ppm	CMIT/MIT*	55965-84-9	-	613-167-00-5	-	Skin Corr. 1C;H314 Skin Sens. 1A;H317 Eye Dam. 1;H318 Acute Tox. 3;H301 Acute Tox. 2;H310 Acute Tox. 2;H330 Aquatic Acute 1;H400 (M=100) Aquatic Chronic 1;H410 (M=100) EUH071

* CMIT/MIT = reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1) reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)

Wording of hazard statements - see section 16

SECTION 4: First aid measures**4.1. Description of first aid measures**

Inhalation: Move the affected person to fresh air. Keep at rest. If needed: get medical attention.

Skin contact: Remove contaminated clothing and wash with soap and water. In case of rash, wound, or other skin irritation: Seek medical advice.

Eye contact: Flush with water or physiological salt water, holding eye lids open, remember to remove contact lenses, if any. If irritation persists: Seek medical advice.

Ingestion: Rinse mouth and drink plenty of water. Keep under surveillance. If needed: get medical attention.

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

May cause slight irritation of skin, eyes, lungs and gastrointestinal tract. May cause an allergic reaction.

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

Show this safety data sheet to a physician or emergency ward.

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

Not combustible; aqueous solution.

5.2. Special hazards arising from the substance or mixture

Not relevant (the product is not combustible).

5.3. Advice for firefighters

When extinguishing surrounding fires use breathing apparatus with an independent source of air.

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

Use personal protective equipment - see section 8.

6.2. Environmental precautions

Avoid empty into drains. If large amounts of the mixture contaminate sewages, inform appropriate authorities in accordance with local regulations.

6.3. Methods and material for containment and cleaning up

Absorb spilled liquid and place spillage in a plastic container. Further handling of spillage - see section 13.

6.4. Reference to other sections

See references above.

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

Avoid contact with skin, eyes and clothing.

7.2. Conditions for safe storage, including any incompatibilities

At 2-8°C. Keep container closed when not in use. Protected against light.

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

Occupational exposure limits (EH40/2018):

	Long-term exposure limit (8-hr TWA)	Short-term exposure limit (15-minute STEL)	Comment
Ethane-1,2-diol			Sk
Particulate	10 mg/m ³	-	
Vapour	20 ppm = 52 mg/m ³	40 ppm = 104 mg/m ³	

Sk: Can be absorbed through the skin

<u>DNEL:</u>	<u>Exposure</u>	<u>Value</u>	<u>Population</u>	<u>Effects</u>
Ethane-1,2-diol	Long term - inhalation	35 mg/m ³	Worker	Local
	Long term - dermal	106 mg/kg/d	Worker	Systemic
	Long term - inhalation	7 mg/m ³	Consumer	Local
	Long term - dermal	53 mg/kg/d	Consumer	Systemic
<u>PNEC:</u>	<u>Medium</u>	<u>Value</u>		
Ethane-1,2-diol	Freshwater	10 mg/l		
	Marine water	1 mg/l		
	Intermittent release (Fresh water)	10 mg/l		
	Intermittent release (Marine water)	1 mg/l		
	Freshwaters sediment	37 mg/kg		
	Marine water sediment	3.7 mg/kg		
	Soil	1.53 mg/kg		
	STP	199.5 mg/l		

8.2. Exposure controls

Appropriate engineering controls: None particular.

Personal protective equipment:

Inhalation: Not relevant during normal use.

Skin: In case of prolonged or repeated work: Wear protective gloves (EN374) e.g. of nitrile.
Breakthrough time: approximately 3 hours.

Eyes: Not relevant during normal use. Safety goggles (EN166) when there is risk of eye contact.

Environmental exposure controls: None particular.

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

Appearance:	Colourless to slight yellow liquid
Odour:	None
Odour threshold:	Not relevant
pH:	7.2
Melting point / freezing point (°C):	No available data
Initial boiling point and boiling range (°C):	No available data
Decomposition temperature (°C):	No available data
Flash point (°C):	Not relevant
Evaporation rate:	No available data
Flammability (solid, gas):	Not relevant
Upper/lower flammability or explosive limits (vol.-%):	Not relevant
Vapour pressure (hPa, 20°C):	No available data
Vapour density (air=1):	No available data
Relative density (g/cm ³):	~ 1
Solubility:	Completely soluble in water
Partition coefficient: n-octanol/water, Log K _{ow} :	No available data
Auto-ignition temperature (°C):	Not relevant
Viscosity:	No available data
Explosive properties:	Not relevant
Oxidising properties:	Not relevant

9.2. Other information

None relevant

SECTION 10: Stability and reactivity**10.1. Reactivity**

No available data.

10.2. Chemical stability

Stable under normal conditions - see section 7.

10.3. Possibility of hazardous reactions

None known

10.4. Conditions to avoid

Excessive heating and freezing

10.5. Incompatible materials

None known

10.6. Hazardous decomposition products

None known

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

Hazard class	Data	Test	Data source
Acute toxicity:			
Inhalation	LC ₅₀ (rat) > 4.62 mg/l/4H (vapours) (CMIT/MIT)	No info	EU Biocide
Dermal	LD ₅₀ (rabbit) = 660 mg/kg (CMIT/MIT) LD ₅₀ (mouse) = >3500 mg/kg (Ethane-1,2-diol)	No info No info	EU Biocide Supplier
Oral	LD ₅₀ (rat) = 457 mg/kg (CMIT/MIT) LD ₅₀ (rat) = >4500 mg/kg (Ethane-1,2-diol)	No info No info	EU Biocide Supplier
Corrosion/irritation:	Corrosive, rabbit (CMIT/MIT) No skin or eye irritation, rabbit (Ethane-1,2-diol)	OECD 404 No info	EU Biocide ECHA
Sensitization:	Skin sensitization (CMIT/MIT) Not skin sensitising, guinea pig (Ethane-1,2-diol)	Buehler OECD 406	EU Biocide ECHA
CMR:	No CMR effects (Ethane-1,2-diol)	OECD 471, No info	ECHA

Information on likely routes of exposure: Skin, lungs and ingestion.

Symptoms:

Inhalation:	Inhalation of atomized liquid may cause irritation of the upper respiratory tract.
Skin:	May cause irritation with redness. Ethane-1,2-diol may be absorbed through the skin.
Eyes:	May cause irritation with redness.
Ingestion:	Ingestion of large amounts can cause irritation with nausea and stomach ache.
Chronic effects:	Frequent contact with skin may cause sensitization. Symptoms are redness, swelling and itching. Prolonged or frequent exposure to vapours of volatile organic compounds may result in damage on liver, kidneys, blood or central nervous system (including brain damage).

SECTION 12: Ecological information**12.1. Toxicity**

Aquatic	Data	Test (Media)	Data source
Fish	LC ₅₀ (Salmo gairdneri, 96h) = 0.19 mg/l (CMIT/MIT) LC ₅₀ (Pimephales promelas, 96h) = 72860 mg/l (Ethane-1,2-diol)	No info EPA 600/4-90/027	EU Biocide ECHA
Crustacean	EC ₅₀ (Crassostrea virginica, 48h) = 0.028 mg/l (CMIT/MIT) EC ₅₀ (Daphnia magna, 48h) = >100 mg/l (Ethane-1,2-diol)	No info OECD 202	EU Biocide ECHA
Algae	EC ₅₀ (Selenastrum cap. 72h) = 0.018 mg/l (CMIT/MIT) NOEC (Pseudokirchneriella sub. 72h) = >100 mg/l (Ethane-1,2-diol)	No info OECD 201	EU Biocide ECHA

12.2. Persistence and degradability

CMIT/MIT is not readily biodegradable (<56%, 28d, OECD 301B).

Ethane-1,2-diol is readily degradable (>90%, 10d, OECD Guideline 301A)

12.3. Bioaccumulative potential

CMIT/MIT: $1 < \log K_{ow} < 3$ – Possible moderate bioaccumulative.

Ethane-1,2-diol: $\log K_{ow} < 1$ - No bioaccumulation expected.

12.4. Mobility in soil

No available or applicable data.

12.5. Results of PBT and vPvB assessment

No ingredients are PBT/vPvB, according to the criteria in REACH Annex XIII.

12.6. Other adverse effects

None known.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Disposal should be according to local, state or national legislation. Dispose of through authority facilities or pass to chemical disposal company.

EWC-code:

16 05 09 (mixture itself)

15 02 03 (Paper towel, inert material etc. contaminated with the mixture)

SECTION 14: Transport information

Not dangerous goods according to ADR/RID/IMDG/IATA

14.1. UN number None

14.2. UN proper shipping name None

14.3. Transport hazard class(es) None

14.4. Packing group None

14.5. Environmental hazards None

14.6. Special precautions for user None

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code Not relevant

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

None

15.2. Chemical safety assessment

No CSR

SECTION 16: Other information**Hazard statements mentioned in section 3:**

H301: Toxic if swallowed.

H302: Harmful if swallowed.

H310: Fatal in contact with skin.

H330: Fatal if inhaled.

H314: Causes severe skin burns and eye damage.

H317: May cause an allergic skin reaction.

H318: Causes serious eye damage.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

EUH071: Corrosive to the respiratory tract.

EUH208: Contains ... May produce an allergic reaction.

EUH210: Safety data sheet available on request.

Abbreviations:

CMR = Carcinogenicity, mutagenicity and reproductive toxicity.

CSR = Chemical Safety Report

DNEL = Derived No-Effect Level

EC50 = Effect Concentration 50 %

FW = Fresh Water

LC₅₀ = Lethal Concentration 50 %

LD₅₀ = Lethal Dose 50 %

PBT = Persistent, Bioaccumulative, Toxic

PNEC = Predicted No-Effect Concentration

vPvB = very Persistent, very Bioaccumulative

SECTION 16: Other information (continued)**Literature:**

ECHA = European Chemicals Agency

EU Biocide = Assessment Report for CMIT/MIT

Training advice:

No special training is required. However, the user should be well instructed in the execution of his/her task, be familiar with this Safety Data Sheet and have normal training in the use of personal protective equipment.

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