

SAFETY DATA SHEET according to Regulation 1907/2006

Product name: **EK-CRYOFUEL OPAQUE CONCENTRATE**

Creation date: **31.1.2017** · Revision: **17.3.2017** · Version: **1**

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name

EK-CRYOFUEL OPAQUE CONCENTRATE



chemius.net/v2qe2

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

Use

Coolant for water cooling of computer systems.

Uses advised against

Not for consumption.

1.3. Details of the supplier of the safety data sheet

Manufacturer

KIMI d.o.o.
Planjava 1, 1236 Trzin, Slovenia
Tel: 00386 (0)1 5300 550
Fax: 00386 (0)1 5300 580
e-mail: info@kimi.si

Supplier

EKWB d.o.o.
Address: Poslovna Cona Pod Lipami 18, 1218 Komenda, Slovenia
Tel.: 0590 96610

1.4. Emergency telephone number

Emergency

112

Supplier

0590 96610

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Reg. 1272/2008

Skin Sens. 1; H317 May cause an allergic skin reaction.

2.2 Label elements

2.2.1. Labelling according to Regulation (EC) No 1272/2008 [CLP]



Signal word: **Warning**

H317 May cause an allergic skin reaction.

P102 Keep out of reach of children.

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P501 Dispose of contents/container in accordance with local regulation.

2.2.2. Contains:

reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (CAS: 55965-84-9, Index: 613-167-00-5)

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2.2.3. Special provisions

Special hazards are not known or expected.

2.3. Other hazards

No information

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

For mixtures see 3.2.

3.2. Mixtures

Chemical name	CAS EC Index	%	Classification according to Regulation (EC) No 1272/2008 [CLP]	REACH reg. number
sodium 2-ethylhexanoate	19766-89-3 243-283-8 -	1-2,5	Repr. 2; H361d	-
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1)	55965-84-9 - 613-167-00-5	0,01-0,1	Acute Tox. 3; H301 Acute Tox. 3; H311 Skin Corr. 1B; H314 Skin Sens. 1; H317 Acute Tox. 3; H331 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	-

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

General measures

Never give anything by mouth to an unconscious person. Place patient stably in side position for transportation.

Inhalation

Remove patient to fresh air-move out of dangerous area. If symptoms occur it is necessary to search for medical help.

Skin contact

Take off all contaminated clothing. If symptoms persist seek medical attention. Wash thoroughly with plenty of water and soap!

Eye contact

Immediately flush eyes with running water, keeping eyelids open. If irritation persist, seek professional medical attention.

Ingestion

Do not induce vomiting. Rinse mouth with water. In case of doubt or if feeling unwell seek medical help. Show the physician the Safety Data Sheet or label.

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

Inhalation

Excessive exposure to spray mist, fog, or vapour may cause respiratory irritation.

Skin contact

May cause sensitisation by skin contact.

Eye contact

Contact with eyes can cause irritation (redness, tearing, pain).

Ingestion

May cause nausea/vomiting and diarrhea.

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

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SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide. Dry chemical powder. Water spray. Alcohol resistant foam.

Unsuitable extinguishing media

Full water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

In case of a fire toxic gases can generate; do not inhale gases/smoke.

5.3. Advice for firefighters

Protective actions

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Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective clothing for fire-fighters (including helmets, protective boots and gloves) (EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (EN 137) .

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment

Use personal protective equipment (Section 8).

Emergency procedures

Ensure adequate ventilation.

6.1.2. For emergency responders

-

6.2. Environmental precautions

Do not allow product to reach water/drains/sewage systems or permeable soil. If accidental entry into water or ground occurs, inform responsible authorities.

6.3. Methods and material for containment and cleaning up

6.3.1. For containment

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6.3.2. For cleaning up

Absorb product (with inert material), collect it in special container and dispose it according to valid regulations on handling with waste.

6.3.3. Other information

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6.4. Reference to other sections

See also sections 8 and 13.

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SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

7.1.1. Protective measures

Measures to prevent fire

Ensure adequate ventilation.

Measures to prevent aerosol and dust generation

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Measures to protect the environment

Do not discharge into drains, surface water and soil. After use immediately close container tightly.

7.1.2. Advice on general occupational hygiene

Use good personal hygiene practices-wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with skin and eyes. Do not breathe vapours/mist.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1. Technical measures and storage conditions

Keep away from food, drink and animal feedingstuffs. Store at room temperature. Keep out of the reach of children.

7.2.2. Packaging materials

The original container of producer.

7.2.3. Requirements for storage rooms and vessels

Close open containers after use. Put the container upright to prevent from leaking.

7.2.4. Storage class

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7.2.5. Further information on storage conditions

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7.3. Specific end use(s)

Recommendations

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Industrial sector specific solutions

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1. Occupational Exposure limit values

Chemical name (CAS)	Limit values		Short-term exposure limit		Remarks	Biological Tolerance Values
	ml/m ³ (ppm)	mg/m ³	ml/m ³ (ppm)	mg/m ³		
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)		0,05			8 h	

8.1.2. Information on monitoring procedures

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

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8.1.3. DNEL values

For components

Chemical name	Type	exp. route	exp. frequency	value	Remark
sodium 2-ethylhexanoate (19766-89-3)	Worker	dermal	long term (systemic effects)	2 mg/kg bw/day	
sodium 2-ethylhexanoate (19766-89-3)	Worker	inhalation	long term (systemic effects)	14 mg/m ³	
sodium 2-ethylhexanoate (19766-89-3)	Consumer	oral	long term (systemic effects)	1 mg/kg bw/day	
sodium 2-ethylhexanoate (19766-89-3)	Consumer	dermal	long term (systemic effects)	1 mg/kg bw/day	
sodium 2-ethylhexanoate (19766-89-3)	Consumer	inhalation	long term (systemic effects)	3,5 mg/m ³	

8.1.4. PNEC values

For components

Chemical name	exp. route	value	Remark
sodium 2-ethylhexanoate (19766-89-3)	fresh water	0,36 mg/l	
sodium 2-ethylhexanoate (19766-89-3)	marine water	0,036 mg/l	
sodium 2-ethylhexanoate (19766-89-3)	water, intermittent release	0,493 mg/l	
sodium 2-ethylhexanoate (19766-89-3)	fresh water sediment	0,301 mg/kg	dry weight
sodium 2-ethylhexanoate (19766-89-3)	marine water sediment	0,0301 mg/kg	dry weight
sodium 2-ethylhexanoate (19766-89-3)	soil	0,0579 mg/kg	dry weight
sodium 2-ethylhexanoate (19766-89-3)	water treatment plant	71,7 mg/l	

8.2. Exposure controls

8.2.1. Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Use good personal hygiene practices-wash hands at breaks and when done working with material.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in the area with increased concentration.

8.2.2. Personal protective equipment

Eye and face protection

Safety glasses with side protection. (EN 166)

Hand protection

Protective gloves (EN 374).

Skin protection

Cotton protective clothing (EN ISO 13688) and shoes that cover the entire foot (EN ISO 20345).

Respiratory protection

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Thermal hazards

-

8.2.3. Environmental exposure controls

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- Physical state:	liquid
- Colour:	according to specification, milky
- Odour:	characteristic

Important health, safety and environmental information

- pH	8 – 9 at 20 °C
- Melting point	No information
- Boiling point/boiling range	No information
- Flashpoint	No information
- Evaporation rate	No information
- Ignition temperature	No information
- Explosion limits (vol%)	No information
- Vapour pressure	No information
- Vapour density	No information
- Density	Density: ca. 1 g/cm ³ at 20 °C
- Solubility	Water: miscible
- Partition coefficient	No information
- Auto-ignition temperature	No information
- Decomposition temperature	No information
- Viscosity	No information
- Explosive properties	No information
- Oxidising properties	No information

9.2. Other information

- Remarks:	
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SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

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10.2. Chemical stability

Product is stable under normal conditions according to handling and storage.

10.3. Possibility of hazardous reactions

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10.4. Conditions to avoid

No special precautions required. Consider the directions for use and storage.

10.5. Incompatible materials

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10.6. Hazardous decomposition products

Under normal use conditions no hazardous decomposition products expected. In case of fire/explosion vapours dangerous for health are spread.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

11.1.1. Acute toxicity

For components

Chemical name	exp. route	Type	species	Time	value	Method	Remark
sodium 2-ethylhexanoate (19766-89-3)	oral	LD ₅₀	rat		2043 mg/kg bw	OECD 401	
sodium 2-ethylhexanoate (19766-89-3)	dermal	LD ₅₀	rat		> 2000 mg/kg bw	OECD 402	
sodium 2-ethylhexanoate (19766-89-3)	inhalation (vapours)	LC ₀	rat	8 h	0,11 mg/l	OECD 403	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	oral	LD ₅₀	rat		53 mg/kg		
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	inhalation	LC ₅₀	rat	4 h	330 mg/m ³		
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	inhalation	LC ₅₀	rat	4 h	2,36 mg/l		
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	dermal	LD ₅₀	rabbit		660 mg/kg		

11.1.2. Skin corrosion/irritation, serious eye damage/irritation

For components

Chemical name	exp. route	species	Time	result	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	dermal	rabbit		Corrosive	OECD 404	

11.1.3. Respiratory or skin sensitisation

For components

Chemical name	exp. route	species	Time	result	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	dermal			May cause sensitisation by skin contact.		

11.1.4. Carcinogenicity, Mutagenicity, Reproductive toxicity

Carcinogenicity

- For components

Chemical name	exp. route	Type	species	Time	value	result	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)						not carcinogenic		

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(Germ cell) mutagenicity

- For components

Chemical name	Type	species	Time	result	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)				Not mutagenic.		

Reproductive toxicity

- For components

Chemical name	Reproductive toxicity type	Type	species	Time	value	result	Method	Remark
sodium 2-ethylhexanoate (19766-89-3)	Teratogenicity	oral	rat			Increased incidence of malformations, delayed fetal growth, lower birth rates.		(2-EXA)
sodium 2-ethylhexanoate (19766-89-3)	Teratogenicity		mouse			birth malformations		intraperitoneal
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)						Not toxic for reproduction.		

Summary of evaluation of the CMR properties

The product is not classified as carcinogenic, mutagenic or toxic for reproduction.

11.1.5. STOT - single and repeated exposure

For components

Chemical name	exp. route	Type	species	Time	organ	value	result	Method	Exposure	Remark
sodium 2-ethylhexanoate (19766-89-3)	oral	-	rat				2-Ethylhexanoic acid (2-EXA) caused an increase in liver size and enzyme levels when repeatedly administered to rats via the diet.		Repeated exposure	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	inhalation	-					Excessive exposure may cause irritation of the upper respiratory tract (nose and throat).		Repeated exposure	

11.1.6. Aspiration hazard

For components

Chemical name	result	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	During ingestion or vomiting, inhalation into the lungs may occur, which can cause tissue damage or lung injury.		

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SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.1. Acute (short-term) toxicity

For components

Substance (CAS Nr.)	Type	Value	Exposure time	Species	Organism	Method	Remark
sodium 2-ethylhexanoate (19766-89-3)	LC ₅₀	> 100 mg/L	96 h	fish	<i>Oryzias latipes</i>	OECD 203	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	EC ₅₀	0,16 mg/L	48 h	crustaceans	<i>Daphnia sp.</i>		
	LC ₅₀	0,19 mg/L	96 h	fish			

12.1.2. Chronic (long-term) toxicity

For components

Substance (CAS Nr.)	Type	Value	Exposure time	Species	Organism	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	NOEC	0,098 mg/l	28 days	fish	<i>Oncorhynchus mykiss</i>	OECD 210	
	NOEC	0,0036 mg/l	21 days	crustaceans	<i>Daphnia magna</i>	OECD 211	

12.2. Persistence and degradability

12.2.1. Abiotic degradation, physical- and photo-chemical elimination

For components

Substance (CAS Nr.)	Environment	Type / Method	Half Time	Evaluation	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	Air	photodegradation	0,38 – 1,3 days	50%		half-life

12.2.2. Biodegradation

For components

Substance (CAS Nr.)	Organism	Rate	Time	Evaluation	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	aerobic	> 60 %	28 days	readily biodegradable	OECD 301 D	

12.3. Bioaccumulative potential

12.3.1. Partition coefficient

For components

Substance (CAS Nr.)	Media	value	Temperature	pH	Concentration	Method
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	log Kow	-0,71 – 0,75	20 °C			OECD 117

12.3.2. Bioconcentration factor (BCF)

No information

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12.4. Mobility in soil

12.4.1. Known or predicted distribution to environmental compartments

No information

12.4.2. Surface tension

No information

12.4.3. Adsorption/Desorption

For components

Substance (CAS Nr.)	Organism	Criterion	value	Evaluation	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	Soil		28			Koc, estimation

12.5. Results of PBT and vPvB assessment

No evaluation.

12.6. Other adverse effects

No information

12.7. Additional information

For product

Do not allow to enter ground water, water course or sewage system.

For components

Substance: sodium 2-ethylhexanoate

Do not allow to reach ground water, water bodies or sewage systems.

Substance: reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1)

This substance is not in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

13.1.1. Product / Packaging disposal

Waste chemical

Disposal must be made according to official regulations: to leave it to authorized collector/remover/transformer of hazardous waste.

- Waste codes / waste designations according to LoW

16 01 14* - antifreeze fluids containing dangerous substances

Packaging

Completely emptied containers leave to approved waste disposal authorities in charge.

- Waste codes / waste designations according to LoW

15 01 02 - plastic packaging

13.1.2. Waste treatment-relevant information

-

13.1.3. Sewage disposal-relevant information

-

13.1.4. Other disposal recommendations

-

SECTION 14. TRANSPORT INFORMATION

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14.1. UN number

not applicable

14.2. UN proper shipping name

Not dangerous according to transport regulations.

14.3. Transport hazard class(es)

not applicable

14.4. Packing group

not applicable

14.5. Environmental hazards

NO

14.6. Special precautions for user

not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15. REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2015/830)

- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

15.1.1. Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)

not applicable

15.2. Chemical Safety Assessment

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

SECTION 16. OTHER INFORMATION

Indication of changes

-

Key literature references and sources for data

MSDS of ingredients of the product.

List of relevant H phrases

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H331 Toxic if inhaled.

H361d Suspected of damaging the unborn child.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

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The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.

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SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name

EK-CRYOFUEL OPAQUE CONCENTRATE



chemius.net/v2qe2

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

Use

Coolant for water cooling of computer systems.

Uses advised against

Not for consumption.

1.3. Details of the supplier of the safety data sheet

Manufacturer

KIMI d.o.o.
Planjava 1, 1236 Trzin, Slovenia
Tel: 00386 (0)1 5300 550
Fax: 00386 (0)1 5300 580
e-mail: info@kimi.si

Supplier

EKWB d.o.o.
Address: Poslovna Cona Pod Lipami 18, 1218 Komenda, Slovenia
Tel.: 0590 96610

1.4. Emergency telephone number

Emergency

112

Supplier

0590 96610

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Reg. 1272/2008

Skin Sens. 1; H317 May cause an allergic skin reaction.

2.2 Label elements

2.2.1. Labelling according to Regulation (EC) No 1272/2008 [CLP]



Signal word: **Warning**

H317 May cause an allergic skin reaction.

P102 Keep out of reach of children.

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

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

2.2.2. Contains:

reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (CAS: 55965-84-9, Index: 613-167-00-5)

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2.2.3. Special provisions

Special hazards are not known or expected.

2.3. Other hazards

No information

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

For mixtures see 3.2.

3.2. Mixtures

Chemical name	CAS EC Index	%	Classification according to Regulation (EC) No 1272/2008 [CLP]	REACH reg. number
sodium 2-ethylhexanoate	19766-89-3 243-283-8 -	1-2,5	Repr. 2; H361d	-
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1)	55965-84-9 - 613-167-00-5	0,01-0,1	Acute Tox. 3; H301 Acute Tox. 3; H311 Skin Corr. 1B; H314 Skin Sens. 1; H317 Acute Tox. 3; H331 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	-

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

General measures

Never give anything by mouth to an unconscious person. Place patient stably in side position for transportation.

Inhalation

Remove patient to fresh air-move out of dangerous area. If symptoms occur it is necessary to search for medical help.

Skin contact

Take off all contaminated clothing. If symptoms persist seek medical attention. Wash thoroughly with plenty of water and soap!

Eye contact

Immediately flush eyes with running water, keeping eyelids open. If irritation persist, seek professional medical attention.

Ingestion

Do not induce vomiting. Rinse mouth with water. In case of doubt or if feeling unwell seek medical help. Show the physician the Safety Data Sheet or label.

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

Inhalation

Excessive exposure to spray mist, fog, or vapour may cause respiratory irritation.

Skin contact

May cause sensitisation by skin contact.

Eye contact

Contact with eyes can cause irritation (redness, tearing, pain).

Ingestion

May cause nausea/vomiting and diarrhea.

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

-

SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide. Dry chemical powder. Water spray. Alcohol resistant foam.

Unsuitable extinguishing media

Full water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

In case of a fire toxic gases can generate; do not inhale gases/smoke.

5.3. Advice for firefighters

Protective actions

-

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective clothing for fire-fighters (including helmets, protective boots and gloves) (EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (EN 137) .

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment

Use personal protective equipment (Section 8).

Emergency procedures

Ensure adequate ventilation.

6.1.2. For emergency responders

-

6.2. Environmental precautions

Do not allow product to reach water/drains/sewage systems or permeable soil. If accidental entry into water or ground occurs, inform responsible authorities.

6.3. Methods and material for containment and cleaning up

6.3.1. For containment

-

6.3.2. For cleaning up

Absorb product (with inert material), collect it in special container and dispose it according to valid regulations on handling with waste.

6.3.3. Other information

-

6.4. Reference to other sections

See also sections 8 and 13.

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SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

7.1.1. Protective measures

Measures to prevent fire

Ensure adequate ventilation.

Measures to prevent aerosol and dust generation

-

Measures to protect the environment

Do not discharge into drains, surface water and soil. After use immediately close container tightly.

7.1.2. Advice on general occupational hygiene

Use good personal hygiene practices-wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with skin and eyes. Do not breathe vapours/mist.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1. Technical measures and storage conditions

Keep away from food, drink and animal feedingstuffs. Store at room temperature. Keep out of the reach of children.

7.2.2. Packaging materials

The original container of producer.

7.2.3. Requirements for storage rooms and vessels

Close open containers after use. Put the container upright to prevent from leaking.

7.2.4. Storage class

-

7.2.5. Further information on storage conditions

-

7.3. Specific end use(s)

Recommendations

-

Industrial sector specific solutions

-

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1. Occupational Exposure limit values

Chemical name (CAS)	Limit values		Short-term exposure limit		Remarks	Biological Tolerance Values
	ml/m ³ (ppm)	mg/m ³	ml/m ³ (ppm)	mg/m ³		
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)		0,05			8 h	

8.1.2. Information on monitoring procedures

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

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8.1.3. DNEL values

For components

Chemical name	Type	exp. route	exp. frequency	value	Remark
sodium 2-ethylhexanoate (19766-89-3)	Worker	dermal	long term (systemic effects)	2 mg/kg bw/day	
sodium 2-ethylhexanoate (19766-89-3)	Worker	inhalation	long term (systemic effects)	14 mg/m ³	
sodium 2-ethylhexanoate (19766-89-3)	Consumer	oral	long term (systemic effects)	1 mg/kg bw/day	
sodium 2-ethylhexanoate (19766-89-3)	Consumer	dermal	long term (systemic effects)	1 mg/kg bw/day	
sodium 2-ethylhexanoate (19766-89-3)	Consumer	inhalation	long term (systemic effects)	3,5 mg/m ³	

8.1.4. PNEC values

For components

Chemical name	exp. route	value	Remark
sodium 2-ethylhexanoate (19766-89-3)	fresh water	0,36 mg/l	
sodium 2-ethylhexanoate (19766-89-3)	marine water	0,036 mg/l	
sodium 2-ethylhexanoate (19766-89-3)	water, intermittent release	0,493 mg/l	
sodium 2-ethylhexanoate (19766-89-3)	fresh water sediment	0,301 mg/kg	dry weight
sodium 2-ethylhexanoate (19766-89-3)	marine water sediment	0,0301 mg/kg	dry weight
sodium 2-ethylhexanoate (19766-89-3)	soil	0,0579 mg/kg	dry weight
sodium 2-ethylhexanoate (19766-89-3)	water treatment plant	71,7 mg/l	

8.2. Exposure controls

8.2.1. Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Use good personal hygiene practices-wash hands at breaks and when done working with material.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in the area with increased concentration.

8.2.2. Personal protective equipment

Eye and face protection

Safety glasses with side protection. (EN 166)

Hand protection

Protective gloves (EN 374).

Skin protection

Cotton protective clothing (EN ISO 13688) and shoes that cover the entire foot (EN ISO 20345).

Respiratory protection

-

Thermal hazards

-

8.2.3. Environmental exposure controls

-

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- Physical state:	liquid
- Colour:	according to specification, milky
- Odour:	characteristic

Important health, safety and environmental information

- pH	8 – 9 at 20 °C
- Melting point	No information
- Boiling point/boiling range	No information
- Flashpoint	No information
- Evaporation rate	No information
- Ignition temperature	No information
- Explosion limits (vol%)	No information
- Vapour pressure	No information
- Vapour density	No information
- Density	Density: ca. 1 g/cm ³ at 20 °C
- Solubility	Water: miscible
- Partition coefficient	No information
- Auto-ignition temperature	No information
- Decomposition temperature	No information
- Viscosity	No information
- Explosive properties	No information
- Oxidising properties	No information

9.2. Other information

- Remarks:	
-------------------	--

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

-

10.2. Chemical stability

Product is stable under normal conditions according to handling and storage.

10.3. Possibility of hazardous reactions

-

10.4. Conditions to avoid

No special precautions required. Consider the directions for use and storage.

10.5. Incompatible materials

-

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10.6. Hazardous decomposition products

Under normal use conditions no hazardous decomposition products expected. In case of fire/explosion vapours dangerous for health are spread.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

11.1.1. Acute toxicity

For components

Chemical name	exp. route	Type	species	Time	value	Method	Remark
sodium 2-ethylhexanoate (19766-89-3)	oral	LD ₅₀	rat		2043 mg/kg bw	OECD 401	
sodium 2-ethylhexanoate (19766-89-3)	dermal	LD ₅₀	rat		> 2000 mg/kg bw	OECD 402	
sodium 2-ethylhexanoate (19766-89-3)	inhalation (vapours)	LC ₀	rat	8 h	0,11 mg/l	OECD 403	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	oral	LD ₅₀	rat		53 mg/kg		
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	inhalation	LC ₅₀	rat	4 h	330 mg/m ³		
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	inhalation	LC ₅₀	rat	4 h	2,36 mg/l		
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	dermal	LD ₅₀	rabbit		660 mg/kg		

11.1.2. Skin corrosion/irritation, serious eye damage/irritation

For components

Chemical name	exp. route	species	Time	result	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	dermal	rabbit		Corrosive	OECD 404	

11.1.3. Respiratory or skin sensitisation

For components

Chemical name	exp. route	species	Time	result	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	dermal			May cause sensitisation by skin contact.		

11.1.4. Carcinogenicity, Mutagenicity, Reproductive toxicity

Carcinogenicity

- For components

Chemical name	exp. route	Type	species	Time	value	result	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)						not carcinogenic		

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(Germ cell) mutagenicity

- For components

Chemical name	Type	species	Time	result	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)				Not mutagenic.		

Reproductive toxicity

- For components

Chemical name	Reproductive toxicity type	Type	species	Time	value	result	Method	Remark
sodium 2-ethylhexanoate (19766-89-3)	Teratogenicity	oral	rat			Increased incidence of malformations, delayed fetal growth, lower birth rates.		(2-EXA)
sodium 2-ethylhexanoate (19766-89-3)	Teratogenicity		mouse			birth malformations		intraperitoneal
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)						Not toxic for reproduction.		

Summary of evaluation of the CMR properties

The product is not classified as carcinogenic, mutagenic or toxic for reproduction.

11.1.5. STOT - single and repeated exposure

For components

Chemical name	exp. route	Type	species	Time	organ	value	result	Method	Exposure	Remark
sodium 2-ethylhexanoate (19766-89-3)	oral	-	rat				2-Ethylhexanoic acid (2-EXA) caused an increase in liver size and enzyme levels when repeatedly administered to rats via the diet.		Repeated exposure	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	inhalation	-					Excessive exposure may cause irritation of the upper respiratory tract (nose and throat).		Repeated exposure	

11.1.6. Aspiration hazard

For components

Chemical name	result	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	During ingestion or vomiting, inhalation into the lungs may occur, which can cause tissue damage or lung injury.		

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SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.1. Acute (short-term) toxicity

For components

Substance (CAS Nr.)	Type	Value	Exposure time	Species	Organism	Method	Remark
sodium 2-ethylhexanoate (19766-89-3)	LC ₅₀	> 100 mg/L	96 h	fish	<i>Oryzias latipes</i>	OECD 203	
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	EC ₅₀	0,16 mg/L	48 h	crustaceans	<i>Daphnia sp.</i>		
	LC ₅₀	0,19 mg/L	96 h	fish			

12.1.2. Chronic (long-term) toxicity

For components

Substance (CAS Nr.)	Type	Value	Exposure time	Species	Organism	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	NOEC	0,098 mg/l	28 days	fish	<i>Oncorhynchus mykiss</i>	OECD 210	
	NOEC	0,0036 mg/l	21 days	crustaceans	<i>Daphnia magna</i>	OECD 211	

12.2. Persistence and degradability

12.2.1. Abiotic degradation, physical- and photo-chemical elimination

For components

Substance (CAS Nr.)	Environment	Type / Method	Half Time	Evaluation	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	Air	photodegradation	0,38 – 1,3 days	50%		half-life

12.2.2. Biodegradation

For components

Substance (CAS Nr.)	Organism	Rate	Time	Evaluation	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	aerobic	> 60 %	28 days	readily biodegradable	OECD 301 D	

12.3. Bioaccumulative potential

12.3.1. Partition coefficient

For components

Substance (CAS Nr.)	Media	value	Temperature	pH	Concentration	Method
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	log Kow	-0,71 – 0,75	20 °C			OECD 117

12.3.2. Bioconcentration factor (BCF)

No information

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12.4. Mobility in soil

12.4.1. Known or predicted distribution to environmental compartments

No information

12.4.2. Surface tension

No information

12.4.3. Adsorption/Desorption

For components

Substance (CAS Nr.)	Organism	Criterion	value	Evaluation	Method	Remark
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1) (55965-84-9)	Soil		28			Koc, estimation

12.5. Results of PBT and vPvB assessment

No evaluation.

12.6. Other adverse effects

No information

12.7. Additional information

For product

Do not allow to enter ground water, water course or sewage system.

For components

Substance: sodium 2-ethylhexanoate

Do not allow to reach ground water, water bodies or sewage systems.

Substance: reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazolin-3-one (3:1)

This substance is not in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

13.1.1. Product / Packaging disposal

Waste chemical

Disposal must be made according to official regulations: to leave it to authorized collector/remover/transformer of hazardous waste.

- Waste codes / waste designations according to LoW

16 01 14* - antifreeze fluids containing dangerous substances

Packaging

Completely emptied containers leave to approved waste disposal authorities in charge.

- Waste codes / waste designations according to LoW

15 01 02 - plastic packaging

13.1.2. Waste treatment-relevant information

-

13.1.3. Sewage disposal-relevant information

-

13.1.4. Other disposal recommendations

-

SECTION 14. TRANSPORT INFORMATION

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14.1. UN number

not applicable

14.2. UN proper shipping name

Not dangerous according to transport regulations.

14.3. Transport hazard class(es)

not applicable

14.4. Packing group

not applicable

14.5. Environmental hazards

NO

14.6. Special precautions for user

not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15. REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2015/830)

- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

15.1.1. Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)

not applicable

15.2. Chemical Safety Assessment

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

SECTION 16. OTHER INFORMATION

Indication of changes

-

Key literature references and sources for data

MSDS of ingredients of the product.

List of relevant H phrases

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H331 Toxic if inhaled.

H361d Suspected of damaging the unborn child.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

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The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.