

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



Danafloat™ 262

Version	Revision Date:	SDS Number:	Date of last issue: -
2.0	02.27.2024	50001993	Date of first issue: 23.11.2023

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

1.1 Product identifier

Product name Danafloat™ 262

Other means of identification

Product code 50001993

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

Use of the Substance/Mixture : Flotation agents

Recommended restrictions on use : Use as recommended by the label.
For professional users only.

1.3 Details of the supplier of the safety data sheet

Supplier Address

FMC Agricultural Solutions A/S
Thyborønvej 78
DK-7673 Harbøre
Denmark

Telephone: +45 9690 9690
Telefax: +45 9690 9691
E-mail address: SDS-Info@fmc.com .

1.4 Emergency telephone number

For leak, fire, spill or accident emergencies, call:
Denmark: +45-69918573 (CHEMTREC)

Medical emergency:
Denmark: +45 82 12 12 12

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4

H302: Harmful if swallowed.

Skin irritation, Category 2

H315: Causes skin irritation.

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Reproductive toxicity, Category 2

H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.

Long-term (chronic) aquatic hazard, Category 2

H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms

:



Signal word

:

Warning

Hazard statements

:

H302 Harmful if swallowed.
H315 Causes skin irritation.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

:

Prevention:

P201 + P202 Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
P264 Wash thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of the contents/container in accordance with municipal waste management regulations.

Hazardous components which must be listed on the label:

O-isopropyl ethylthiocarbamate

Additional Labelling

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

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2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Mixture

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
O-isopropyl ethylthiocarbamate	141-98-0 205-517-7 01-2119980723-30-0000	Acute Tox. 4; H302 Skin Irrit. 2; H315 Repr. 2; H361fd Aquatic Chronic 2; H411	>= 93 - <= 98
propan-2-ol	67-63-0 200-661-7 603-117-00-0	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 (Central nervous system)	>= 0 - <= 2

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
If potential for exposure exists refer to Section 8 for specific personal protective equipment.

If inhaled : Move to fresh air.

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- If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
Get medical attention if irritation develops and persists.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

- Risks : Harmful if swallowed.
Causes skin irritation.
Suspected of damaging fertility. Suspected of damaging the unborn child.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Dry chemical, CO₂, water spray or regular foam.
- Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Fire may produce irritating, corrosive and/or toxic gases.

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5.3 Advice for firefighters

Special protective equipment for firefighters : Firefighters should wear protective clothing and self-contained breathing apparatus.

Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Never return spills in original containers for re-use.
Mark the contaminated area with signs and prevent access to unauthorized personnel.
Only qualified personnel equipped with suitable protective equipment may intervene.
For disposal considerations see section 13.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Neutralize with chalk, alkali solution or ammonia.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Do not breathe vapours/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
To avoid spills during handling keep bottle on a metal tray.

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Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully re-sealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards. Keep locked up or in an area accessible only to qualified or authorised persons.

Advice on common storage : Do not store near acids.

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : Flotation agents

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
O-isopropyl ethylthio-carbamate	Workers	Inhalation	Long-term systemic effects	0,987 mg/m3
	Workers	Inhalation	Acute systemic effects	7,05 mg/m3
	Workers	Inhalation	Long-term local effects	
Remarks:No hazard identified				
	Workers	Inhalation	Acute local effects	
Remarks:No hazard identified				
	Workers	Dermal	Long-term systemic effects	0,28 mg/kg bw/day
	Workers	Dermal	Acute systemic effects	
Remarks:low hazard (no threshold derived)				
	Workers	Dermal	Long-term local effects	

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	Remarks:low hazard (no threshold derived)		
	Workers	Dermal	Acute local effects
	Remarks:low hazard (no threshold derived)		
	Workers	Eye contact	Local effects
	Remarks:No hazard identified		

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
O-isopropyl ethylthiocarbamate	Fresh water	0,02 mg/l
	Marine water	0,002 mg/l

8.2 Exposure controls

Personal protective equipment

Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Hand protection
Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : No personal respiratory protective equipment normally required.

Protective measures : Plan first aid action before beginning work with this product.
Always have on hand a first-aid kit, together with proper instructions.
Ensure that eye flushing systems and safety showers are located close to the working place.
Wear suitable protective equipment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : liquid

Colour : yellow, to, red

Odour : weak, phenol-like

Odour Threshold : No data available

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Melting point/freezing point : -20 °C (101,3 kPa)

Initial boiling point and boiling range : 75 °C (101,3 kPa)

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Flash point : 182,2 °C(1.013 hPa)

Auto-ignition temperature : 355 °C (1.013 hPa)

Decomposition temperature : No data available

pH : 2 - 4
Concentration: 1 %
(1% solution in water)

Viscosity
Viscosity, dynamic : 2,19 mPa.s (20 °C)
Method: OECD Test Guideline 114

Viscosity, kinematic : No data available

Solubility(ies)
Water solubility : 2,65 g/l (25 °C)
Miscible

Solubility in other solvents : Solvent: Alcohol
soluble

Solvent: Ether
soluble

Solvent: Benzene
soluble

Partition coefficient: n-octanol/water : log Pow: 2,3 (30 °C)

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Vapour pressure	: 950 Pa (20 °C)
Relative density	: 0,9933 (20 °C)
Density	: 0,98 - 1,02 g/cm ³ (20 °C)
Bulk density	: No data available
Relative vapour density	: No data available
Particle characteristics	
Particle size	: No data available
Particle Size Distribution	: No data available
Shape	: No data available

9.2 Other information

Explosives	: Not explosive
Oxidizing properties	: Non-oxidizing

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions	: No decomposition if stored and applied as directed.
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10.4 Conditions to avoid

Conditions to avoid	: Heating of the product will produce harmful and irritant vapours.
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10.5 Incompatible materials

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Materials to avoid : Avoid strong acids, bases, and oxidizers
Copper
Brass

10.6 Hazardous decomposition products

See subsection 5.2.

SECTION 11: Toxicological information

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

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity : LD50 Oral (Rat, female): 568 mg/kg
Method: OECD Test Guideline 425
Test substance: yes

Acute inhalation toxicity : LC50: 20 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rabbit): > 2.000 mg/kg

Components:

O-isopropyl ethylthiocarbamate:

Acute oral toxicity : LD50 Oral (Rat, female): 568 mg/kg
Method: OECD Test Guideline 425

Acute inhalation toxicity : LC50 (Rat): 20 mg/l
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 Dermal (Rabbit): > 2.000 mg/kg

propan-2-ol:

Acute oral toxicity : LD50 (Rat): 5.840 mg/kg

Acute inhalation toxicity : LC0 (Rat, male and female): 10000 ppm
Exposure time: 6 h
Test atmosphere: vapour
Remarks: no mortality

Acute dermal toxicity : LD50 (Rabbit): 16.4 mL/kg

Skin corrosion/irritation

Causes skin irritation.

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Product:

Assessment	:	Irritating to skin.
Result	:	Severe skin irritation

Components:

O-isopropyl ethylthiocarbamate:

Species	:	human skin
Assessment	:	Irritating to skin.
Method	:	OECD Test Guideline 439
Result	:	Skin irritation

propan-2-ol:

Species	:	Rabbit
Result	:	No skin irritation

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Product:

Assessment	:	Not classified as irritant
Result	:	Slight or no eye irritation
Remarks	:	Not expected to be irritating to eyes.

Components:

O-isopropyl ethylthiocarbamate:

Species	:	Rabbit
Assessment	:	Not classified as irritant
Method	:	OECD Test Guideline 405
Result	:	slight irritation

propan-2-ol:

Species	:	Rabbit
Result	:	Irritation to eyes, reversing within 21 days

Respiratory or skin sensitisation

Skin sensitisation

Based on available data, the classification criteria are not met.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Product:

Assessment	:	Not a skin sensitizer.
Result	:	Substance is not considered to be potential skin sensitiser.
Remarks	:	Not expected to cause skin sensitisation

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Components:

O-isopropyl ethylthiocarbamate:

Test Type	: Local lymph node assay (LLNA)
Species	: Mouse
Method	: OECD Test Guideline 429
Result	: Does not cause skin sensitisation.

propan-2-ol:

Test Type	: Buehler Test
Species	: Guinea pig
Method	: OECD Test Guideline 406
Result	: Does not cause skin sensitisation.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Components:

O-isopropyl ethylthiocarbamate:

Genotoxicity in vitro	: Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative
	Test Type: reverse mutation assay Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Result: negative
	Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative
Germ cell mutagenicity- Assessment	: Weight of evidence does not support classification as a germ cell mutagen.

propan-2-ol:

Genotoxicity in vitro	: Test Type: In vitro mammalian cell gene mutation test Result: negative
	Test Type: reverse mutation assay Result: negative
Genotoxicity in vivo	: Test Type: Micronucleus test Species: Mouse (male and female) Application Route: Intraperitoneal injection Result: negative
Germ cell mutagenicity- Assessment	: Weight of evidence does not support classification as a germ cell mutagen.

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Carcinogenicity

Based on available data, the classification criteria are not met.

Components:

propan-2-ol:

Species	: Rat, male and female
Application Route	: Inhalation
Exposure time	: 104 weeks
Dose	: 0, 500, 2500, 5000 ppm
NOAEL	: 5.000 ppm
Method	: OECD Test Guideline 451
Result	: negative

Carcinogenicity - Assessment	: Weight of evidence does not support classification as a carcinogen
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Reproductive toxicity

Suspected of damaging fertility. Suspected of damaging the unborn child.

Components:

O-isopropyl ethylthiocarbamate:

Effects on fertility	: Species: Rat, male and female Application Route: Oral Dose: 31, 103, 309 mg/kg/bw/d General Toxicity - Parent: NOAEL: 31 mg/kg bw/day General Toxicity F1: LOAEL: 31 mg/l Symptoms: Reduced embryonic survival Method: OECD Test Guideline 422 Result: positive
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Effects on foetal development	: Species: Rat Application Route: Oral Dose: 0, 3, 10, 30 mg/kg bw/day General Toxicity Maternal: NOAEL: 30 mg/kg bw/day Developmental Toxicity: LOAEL: 10 mg/kg bw/day Symptoms: Skeletal malformations Method: OECD Test Guideline 414 Result: positive
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Reproductive toxicity - Assessment	: Some evidence of adverse effects on development, based on animal experiments.
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propan-2-ol:

Effects on fertility	: Test Type: Two-generation study Species: Rat, male and female Application Route: Oral Dose: 100, 500, 1000 mg/kgbw/day General Toxicity - Parent: LOAEL: 1.000 mg/kg bw/day General Toxicity F1: NOAEL: 1.000 mg/kg bw/day Result: negative
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Effects on foetal development : Test Type: reproductive and developmental toxicity study
Species: Rat
Application Route: Oral
Dose: 400,800,1200 mg/kgbw
Duration of Single Treatment: 28 d
General Toxicity Maternal: LOAEL: 800 mg/kg bw/day
Developmental Toxicity: LOAEL: 800 mg/kg bw/day
Result: negative

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

STOT - single exposure

Based on available data, the classification criteria are not met.

Components:

propan-2-ol:

Assessment : May cause drowsiness or dizziness.

STOT - repeated exposure

Based on available data, the classification criteria are not met.

Components:

O-isopropyl ethylthiocarbamate:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

O-isopropyl ethylthiocarbamate:

Species	: Rat, male
NOAEL	: 100 mg/kg
Application Route	: Oral
Exposure time	: 90d
Dose	: 0, 30, 100, 300 mg/kg bw/day
Method	: OECD Test Guideline 408

propan-2-ol:

Species	: Rat, male and female
NOAEL	: 5000 ppm
Application Route	: Inhalation
Test atmosphere	: vapour
Exposure time	: 104 weeks
Dose	: 0, 500, 2500, 5000 ppm
Method	: OECD Test Guideline 451

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Aspiration toxicity

Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

O-isopropyl ethylthiocarbamate:

Toxicity to fish	: LC50 (Danio rerio (zebra fish)): 63 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna Straus): 60 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: EC50 (Pseudokirchneriella subcapitata (algae)): 20,8 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
	NOEC (Pseudokirchneriella subcapitata (algae)): 1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

propan-2-ol:

Toxicity to fish	: LC50 (Pimephales promelas (fathead minnow)): 9.640 mg/l Exposure time: 96 h Test Type: flow-through test
Toxicity to daphnia and other aquatic invertebrates	: LC50 (Daphnia magna (Water flea)): 10.000 mg/l Exposure time: 24 h Test Type: static test

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Toxicity to algae/aquatic plants	:	EC10 (Scenedesmus quadricauda (Green algae)): 1.800 mg/l Exposure time: 7 d Test Type: static test
Toxicity to microorganisms	:	(Pseudomonas putida): 1.050 mg/l Exposure time: 16 h Test Type: Cell multiplication inhibition test

12.2 Persistence and degradability

Components:

O-isopropyl ethylthiocarbamate:

Biodegradability	:	Inoculum: activated sludge Result: Not biodegradable Method: OECD Test Guideline 301D
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propan-2-ol:

Biodegradability	:	Inoculum: activated sludge Result: Readily biodegradable. Biodegradation: 50 % Exposure time: 5 d
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12.3 Bioaccumulative potential

Components:

O-isopropyl ethylthiocarbamate:

Partition coefficient: n-octanol/water	:	log Pow: 2,3 (30 °C)
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propan-2-ol:

Bioaccumulation	:	Remarks: Bioaccumulation is unlikely.
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Partition coefficient: n-octanol/water	:	log Pow: 0,05 (25 °C)
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12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
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12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life.
Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

According to the Waste Framework Directive (2008/98/EC), possibilities for reuse or reprocessing should first be considered. If this is not possible, the material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing.

Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

It is recommended to consider possible ways of disposal in the following order:

1. Reuse or recycling should first be considered. If offered for recycling, containers must be emptied and triply rinsed (or equivalent). Do not discharge rinsing water to sewer systems.
2. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.
3. Delivery of the packaging to a licensed service for disposal of hazardous waste.
4. Disposal in a landfill or burning in open air should only occur as a last resort. For disposal in a landfill, containers should be emptied completely, rinsed and punctured to make them

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unusable for other purposes. If burned, stay out of smoke.

SECTION 14: Transport information

14.1 UN number or ID number

ADN	: UN 3082
ADR	: UN 3082
RID	: UN 3082
IMDG	: UN 3082
IATA	: UN 3082

14.2 UN proper shipping name

ADN	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (O-ISOPROPYL ETHYLTHIOCARBAMATE)
ADR	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (O-ISOPROPYL ETHYLTHIOCARBAMATE)
RID	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (O-ISOPROPYL ETHYLTHIOCARBAMATE)
IMDG	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (O-ISOPROPYL ETHYLTHIOCARBAMATE)
IATA	: Environmentally hazardous substance, liquid, n.o.s. (O-ISOPROPYL ETHYLTHIOCARBAMATE)

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADN	: 9	
ADR	: 9	
RID	: 9	
IMDG	: 9	
IATA	: 9	

14.4 Packing group

ADN	
Packing group	: III
Classification Code	: M6
Hazard Identification Number	: 90
Labels	: 9
ADR	

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according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (-)

RID

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

IMDG

Packing group : III
Labels : 9
EmS Code : F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

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SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 3
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	E2	ENVIRONMENTAL HAZARDS
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Other regulations:

When evaluating a workplace, measures must be taken to ensure that employees are not exposed to conditions that may pose a risk during pregnancy or breastfeeding (cf. The Danish Working Environment Authority's Executive Order on The Performance of Work)

Young people under the age of 18 are not allowed to use or be exposed to the product professionally. Young people above the age of 15 are, however, except from this rule if the product is a necessary part of their education.

The components of this product are reported in the following inventories:

TCSI	:	Not in compliance with the inventory
TSCA	:	All substances listed as active on the TSCA inventory
AIIC	:	On the inventory, or in compliance with the inventory
DSL	:	All components of this product are on the Canadian DSL

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ENCS	: On the inventory, or in compliance with the inventory
ISHL	: On the inventory, or in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
TECI	: On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A chemical safety assessment has been performed. The results are attached.

SECTION 16: Other information

Full text of H-Statements

H225	: Highly flammable liquid and vapour.
H302	: Harmful if swallowed.
H315	: Causes skin irritation.
H319	: Causes serious eye irritation.
H336	: May cause drowsiness or dizziness.
H361fd	: Suspected of damaging fertility. Suspected of damaging the unborn child.
H411	: Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Irrit.	: Eye irritation
Flam. Liq.	: Flammable liquids
Repr.	: Reproductive toxicity
Skin Irrit.	: Skin irritation
STOT SE	: Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships car-

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rying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Acute Tox. 4	H302
Skin Irrit. 2	H315
Repr. 2	H361fd
Aquatic Chronic 2	H411

Classification procedure:

Based on product data or assessment
Based on product data or assessment
Based on product data or assessment
Based on product data or assessment

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ANNEX: Exposure assessment and related risk characterisation

1. Introduction

1.1. Overview of uses and Exposure Scenarios

The following table lists all the exposure scenarios (ES).

Table 1. Overview of exposure scenarios and contributing scenarios

Identifiers	Titles of exposure scenarios and the related contributing scenarios	Tonnage (tonnes per year)
ES - IW	Use at industrial site - Use at industrial site - Use at industrial site (ERC 6b) - Worker. Flotation batch process with exposure possible (PROC 5) - Worker. Transfer of substance to flotation process, outdoors, with respiratoric protection (PROC 8b) - Worker. Transfer of substance to flotation process, outdoors, with no respiratoric protection, but measured exposure values (PROC 8b) - Worker. Laboratory analytical work on flotation process (PROC 15)	999.0
IW: Industrial end use at site		

1.2. Introduction to the assessment

1.2.1. Environment

Scope and type of assessment

The scope of exposure assessment and type of risk characterisation required for the environment are described in the following table based on the hazard conclusions presented in the CSR.

Table 2. Type of risk characterisation required for the environment

Protection target	Type of risk characterisation	Hazard conclusion
Freshwater	Quantitative	PNEC aqua (freshwater) = 0.02 mg/L
Sediment (freshwater)	Qualitative	No exposure of sediment expected
Marine water	Quantitative	PNEC aqua (marine water) = 0.002 mg/L
Sediment (marine water)	Qualitative	No exposure of sediment expected
Sewage treatment plant	Qualitative	No emission to STP expected
Air	Not needed	No hazard identified
Agricultural soil	Qualitative	No exposure of soil expected
Predator	Not needed	No potential for bioaccumulation

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Comments on assessment approach:

The regional concentrations are reported in the CSR in section 10.2.1.2 (see Table 54, “Predicted regional exposure concentrations (Regional PEC)”). The local Predicted Exposure Concentrations (PECs) reported for each contributing scenario correspond to the sum of the local concentrations (Clocal) and the regional concentrations (PEC regional).

1.2.2. Man via environment

Scope and type of assessment

The scope of exposure assessment and type of risk characterisation required for man via the environment are described in the following table based on the hazard conclusions reported and justified in the CSR.

Table 1. Type of risk characterisation required for man via the environment

Route of exposure and type of effects	Type of risk characterisation	Hazard conclusion
Inhalation: systemic long-term	Quantitative	DNEL = 29.99 µg/m ³
Oral: systemic long-term	Quantitative	DNEL = 17 µg/kg bw/day

1.2.3. Workers

Scope and type of assessment

The scope of exposure assessment and type of risk characterisation required for workers are described in the following table based on the hazard conclusions presented in the CSR.

Table 4. Type of risk characterisation required for workers

Route	Type of effect	Type of risk characterisation	Hazard conclusion
Inhalation	Systemic long-term	Quantitative	DNEL = 118 µg/m ³
	Systemic acute	Quantitative	DNEL = 7.05 mg/m ³
	Local long-term	Qualitative	Low hazard (no threshold derived)
	Local acute	Qualitative	Low hazard (no threshold derived)
Dermal	Systemic long-term	Quantitative	DNEL = 33.33 µg/kg bw/day
	Systemic acute	Quantitative	DNEL = 2 mg/kg bw/day
	Local long-term	Qualitative	Low hazard (no threshold derived)
	Local acute	Qualitative	Low hazard (no threshold derived)

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2. Exposure scenario: Use at industrial site

Sector of use:

SU 2a, Mining, (without offshore industries)

Environment contributing scenario(s):	
Use at industrial site	ERC 6b
Worker contributing scenario(s):	
Worker. Flotation batch process with exposure possible	PROC 5
Worker. Transfer of substance to flotation process, outdoors, with respiratoric protection	PROC 8b
Worker. Transfer of substance to flotation process, outdoors, with no respiratoric protection, but measured exposure values	PROC 8b
Worker. Laboratory analytical work on flotation process	PROC 15

2.1. Environmental contributing scenario 1: Use at industrial site

2.1.1. Conditions of use

Amount used, frequency and duration of use (or from service life)
• Daily use at site: ≤ 10 tonnes/day
• Annual use at a site: ≤ 999 tonnes/year
• Percentage of tonnage used at regional scale: 100 %
Conditions and measures related to sewage treatment plant
• Municipal STP: no [effectiveness water: 0%] <i>No discharge to sewage treatment plant, all waste are either incinerated or led to holding ponds.</i>
Conditions and measures related to treatment of waste (including article waste)
• Particular considerations on the waste treatment operations: no (low risk) (ERC based assessment demonstrating control of risk with default conditions. Low risk assumed for waste life stage. Waste disposal according to national/local legislation is sufficient.)
Other conditions affecting environmental exposure
• Discharge rate of effluent: ≥ 0 m ³ /d
• Receiving surface water flow rate: ≥ 0 m ³ /d

2.1.2. Releases

The local releases to the environment are reported in the following table.

Table 5. Local releases to the environment

Release	Release factor estimation method	Explanation / Justification
Water	ERC based	Initial release factor: 5% Final release factor: 5% Local release rate: 500 kg/day

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Release	Release factor estimation method	Explanation / Justification
Air	ERC based	Initial release factor: 0.1% Final release factor: 0.1% Local release rate: 10 kg/day
Soil	ERC based	Final release factor: 0.025%

2.1.3. Exposure and risks for the environment and man via the environment

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

Table 6. Exposure concentrations and risks for the environment

Protection target	Exposure concentration	Risk characterisation
Freshwater	Local PEC: 2.321E-4 mg/L	RCR = 0.012
Sediment (freshwater)		Qualitative risk characterisation (see below)
Marine water	Local PEC: 1.987E-5 mg/L	RCR < 0.01
Sediment (marine water)		Qualitative risk characterisation (see below)
Sewage treatment plant		Qualitative risk characterisation (see below)
Agricultural soil		Qualitative risk characterisation (see below)
Man via environment - inhalation	Local PEC: 7.759E-4 mg/m ³	RCR = 0.026
Man via environment - oral	Exposure via food consumption:	
Man via environment - combined routes		RCR = 0.026

Table 7. Contribution to oral intake for man via the environment from local contribution

Type of food	Estimated daily dose	Concentration in food
Drinking water	3.13E-5 mg/kg bw/day	0.001 mg/L
Fish		
Leaf crops	2.765E-6 mg/kg bw/day	1.613E-4 mg/kg ww
Root crops	1.873E-5 mg/kg bw/day	0.003 mg/kg ww
Meat	3.608E-9 mg/kg bw/day	8.39E-7 mg/kg ww
Milk	1.066E-8 mg/kg bw/day	1.33E-6 mg/kg ww

Conclusion on risk characterisation

There is no exposure to sediment (fresh- and marine water), sewage treatment plant or agricultural soil. Use, transfer and laboratory work does not produce any waste intended to be released into the environment.

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2.2. Worker contributing scenario 1: Worker. Flotation batch process with exposure possible (PROC 5)

2.2.1. Conditions of use

	Method
Amount used (or contained in articles), frequency and duration of use/exposure	
• Duration of activity: < 8 hours (avoid carrying out activities involving exposure for more than 8 hours.)	External tool (easyTRA)
• Concentration of substance in a mixture: < 0.01 % w/w <i>Covers substance in the mixture below 0.01 %.</i>	External tool (easyTRA)
Conditions and measures related to personal protection, hygiene and health evaluation	
• Dermal protection: yes (chemically resistant gloves conforming to EN374 with specific activity training) [effectiveness dermal: 95%]	External tool (easyTRA)
Other conditions affecting workers exposure	
• Place of use: outdoor	External tool (easyTRA)

2.2.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

Table 8. Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	0.064 mg/m³ (external tool (easyTRA))	RCR = 0.546
Inhalation, systemic, acute	0.086 mg/m³ (external tool (easyTRA))	RCR = 0.012
Inhalation, local, long-term		Qualitative (see below)
Inhalation, local, acute		Qualitative (see below)
Dermal, systemic, long-term	2.06E-4 mg/kg bw/day (external tool (easyTRA))	RCR < 0.01
Dermal, systemic, acute	2.06E-4 mg/kg bw/day (external tool (easyTRA))	RCR < 0.01
Dermal, local, long-term		Qualitative (see below)
Dermal, local, acute		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.552
Combined routes, systemic, acute		RCR = 0.012

Conclusion on risk characterisation

The available data material suggests that the dominating local effect upon exposure to the substance, both long- and short term, will be irritation. Dermal irritation is prevented by workers wearing gloves at all times when working with the substance. Inhalative irritation is prevented by either working under effective local area ventilation systems or, when this is not available, by wearing air supplied respiratory protection or when not available, a universal filtering respiratory protective

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system, when significant chance for exposure arises. The relative low vapor pressure of the substance further lowers any inhalative exposure below a level, which could give local inhalative irritation. The risk management measures mentioned above (gloves and LEV/respiratory protection) are primarily implemented to eliminate the more severe systemic effect of exposure, but also effectively eliminates local effects. Therefore any long- or short-term risks for local effects upon exposure the substance are controlled.

2.3. Worker contributing scenario 2: Worker. Transfer of substance to flotation process, outdoors, with respiratoric protection (PROC 8b)

2.3.1. Conditions of use

	Method
Amount used (or contained in articles), frequency and duration of use/exposure	
• Duration of activity: < 10 minutes	External tool (easyTRA v.3.5.0)
• Concentration of substance in a mixture: < 95 % w/w	External tool (easyTRA v.3.5.0)
Conditions and measures related to personal protection, hygiene and health evaluation	
• Respiratory protection: yes [effectiveness inhalation: 99%]	External tool (easyTRA v.3.5.0)
• Dermal protection: yes (chemically resistant gloves conforming to EN374 with specific activity training) [effectiveness dermal: 95%]	External tool (easyTRA v.3.5.0)
Other conditions affecting workers exposure	
• Place of use: outdoor	External tool (easyTRA v.3.5.0)

2.3.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

Table 9. Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	0.042 mg/m³ (external tool (easyTRA v.3.5.0))	RCR = 0.36
Inhalation, systemic, acute	4.08 mg/m³ (external tool (easyTRA v.3.5.0))	RCR = 0.579
Inhalation, local, long-term		Qualitative (see below)
Inhalation, local, acute		Qualitative (see below)
Dermal, systemic, long-term	0.014 mg/kg bw/day (external tool (easyTRA v.3.5.0))	RCR = 0.407
Dermal, systemic, acute	0.027 mg/kg bw/day (external tool (easyTRA v.3.5.0))	RCR = 0.014
Dermal, local, long-term		Qualitative (see below)

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Route of exposure and type of effects	Exposure concentration	Risk characterisation
Dermal, local, acute		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.767
Combined routes, systemic, acute		RCR = 0.592

Conclusion on risk characterisation

The available data material suggests that the dominating local effect upon exposure to the substance, both long- and short term, will be irritation. Dermal irritation is prevented by workers wearing gloves at all times when working with the substance. Inhalative irritation is prevented by either working under effective local area ventilation systems or, when this is not available, by wearing air supplied respiratory protection or when not available, a universal filtering respiratory protective system, when significant chance for exposure arises. The relative low vapor pressure of the substance further lowers any inhalative exposure below a level, which could give local inhalative irritation. The risk management measures mentioned above (gloves and LEV/respiratory protection) are primarily implemented to eliminate the more severe systemic effect of exposure, but also effectively eliminates local effects. Therefore any long- or short-term risks for local effects upon exposure the substance are controlled.

2.4. Worker contributing scenario 3: Worker. Transfer of substance to flotation process, outdoors, with no respiratoric protection, but measured exposure values (PROC 8b)

2.4.1. Conditions of use

	Method
Amount used (or contained in articles), frequency and duration of use/exposure	
• Duration of activity: < 10 minutes <i>This work process must not exceed 10 minutes per workday.</i>	External tool (easyTRA v.3.5.0)
• Concentration of substance in a mixture: < 95 % w/w	External tool (easyTRA v.3.5.0)
Technical and organisational conditions and measures	
• Measured inhalation data: 0.05 mg/m ³ <i>This exposure scenario is based on measured worker inhalation data. If such data is not available for a similar work situation, then respiratory protection must be used, see exposure scenario number 11</i>	External tool (easyTRA v.3.5.0)
Conditions and measures related to personal protection, hygiene and health evaluation	
• Dermal protection: yes (chemically resistant gloves conforming to EN374 with specific activity training) [effectiveness dermal: 95%]	External tool (easyTRA v.3.5.0)
Other conditions affecting workers exposure	
• Place of use: outdoor	External tool (easyTRA v.3.5.0)

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2.4.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

Table 10. Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	0.05 mg/m³ (external tool (easyTRA v.3.5.0))	RCR = 0.424
Inhalation, systemic, acute	0.05 mg/m³ (external tool (easyTRA v.3.5.0))	RCR < 0.01
Inhalation, local, long-term		Qualitative (see below)
Inhalation, local, acute		Qualitative (see below)
Dermal, systemic, long-term	0.014 mg/kg bw/day (external tool (easyTRA v.3.5.0))	RCR = 0.407
Dermal, systemic, acute	0.027 mg/kg bw/day (external tool (easyTRA v.3.5.0))	RCR = 0.014
Dermal, local, long-term		Qualitative (see below)
Dermal, local, acute		Qualitative (see below)
Combined routes, systemic, long-term		RCR = 0.831
Combined routes, systemic, acute		RCR = 0.021

Conclusion on risk characterisation

The available data material suggests that the dominating local effect upon exposure to the substance, both long- and short term, will be irritation. Dermal irritation is prevented by workers wearing gloves at all times when working with the substance. Inhalative irritation is prevented by either working under effective local area ventilation systems or, when this is not available, by wearing air supplied respiratory protection or when not available, a universal filtering respiratory protective system, when significant chance for exposure arises. The relative low vapor pressure of the substance further lowers any inhalative exposure below a level, which could give local inhalative irritation. The risk management measures mentioned above (gloves and LEV/respiratory protection) are primarily implemented to eliminate the more severe systemic effect of exposure, but also effectively eliminates local effects. Therefore any long- or short-term risks for local effects upon exposure the substance are controlled.

2.5. Worker contributing scenario 4: Worker. Laboratory analytical work on floatation process (PROC 15)

2.5.1. Conditions of use

	Method
Amount used (or contained in articles), frequency and duration of use/exposure	
• Duration of activity: < 24 hours <i>This work process must not exceed 24 hours per workday.</i>	External tool (easyTRA v.3.5.0)

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	Method
• Concentration of substance in a mixture: < 0.01 % w/w	External tool (easyTRA v.3.5.0)
Conditions and measures related to personal protection, hygiene and health evaluation	
• Dermal protection: yes (chemically resistant gloves conforming to EN374 with specific activity training) [effectiveness dermal: 95%]	External tool (easyTRA v.3.5.0)
Other conditions affecting workers exposure	
• Place of use: indoor	External tool (easyTRA v.3.5.0)

2.5.2. Exposure and risks for workers

The exposure concentrations and risk characterisation ratios (RCR) are reported in the following table.

Table 11. Exposure concentrations and risks for workers

Route of exposure and type of effects	Exposure concentration	Risk characterisation
Inhalation, systemic, long-term	5.52E-4 mg/m³ (external tool (easyTRA v.3.5.0))	RCR < 0.01
Inhalation, systemic, acute	7.36E-4 mg/m³ (external tool (easyTRA v.3.5.0))	RCR < 0.01
Inhalation, local, long-term		Qualitative (see below)
Inhalation, local, acute		Qualitative (see below)
Dermal, systemic, long-term	5.14E-6 mg/kg bw/day (external tool (easyTRA v.3.5.0))	RCR < 0.01
Dermal, systemic, acute	5.14E-6 mg/kg bw/day (external tool (easyTRA v.3.5.0))	RCR < 0.01
Dermal, local, long-term		Qualitative (see below)
Dermal, local, acute		Qualitative (see below)
Combined routes, systemic, long-term		RCR < 0.01
Combined routes, systemic, acute		RCR < 0.01

Conclusion on risk characterisation

The available data material suggests that the dominating local effect upon exposure to the substance, both long- and short term, will be irritation. Dermal irritation is prevented by workers wearing gloves at all times when working with the substance. Inhalative irritation is prevented by either working under effective local area ventilation systems or, when this is not available, by wearing air supplied respiratory protection or when not available, a universal filtering respiratory protective system, when significant chance for exposure arises. The relative low vapor pressure of the substance further lowers any inhalative exposure below a level, which could give local inhalative irritation. The risk management measures mentioned above (gloves and LEV/respiratory protection) are primarily implemented to eliminate the more severe systemic effect of exposure, but also effectively eliminates local effects. Therefore any long- or short-term risks for local effects upon exposure the substance are controlled.