Conforms to EU Regulation 1907/2006/EC as amended. - SDSGHS_NL

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

1.1 Product identifier

Trade name : ROKONSAL SE-2

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

Recommended use : Preservative

1.3 Details of the supplier of the safety data sheet	**1.4 Emergency telephone**
Ashland P.O. Box 8619 NL3009 AP, Rotterdam Netherlands +31 10 497 5000 (in the Netherlands), or contact your local CSR contact person EHSProductSafety@ashland.com	001-800-274-5263/001-859-357-3564, or contact your local emergency telephone number at +31 (0) 88 755 8000. Exclusively for medical professionals in case of acute poisoning. **Product Information** +31 10 497 5000 (in the Netherlands), or contact your local CSR contact person

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.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal Word : Danger

Hazard Statements :
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements :

Prevention:

P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P391 Collect spillage.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous ingredients which must be listed on the label:

bronopol (INN)
tetradonium bromide

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

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
bronopol (INN)	52-51-7 200-143-0 603-085-00-8 01-2119980938-15-xxxx	Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system) Aquatic Acute 1; H400 Aquatic Chronic 2; H411 M-Factor (Acute aquatic toxicity): 10	>= 5 - < 10
tetradonium bromide	1119-97-7 214-291-9	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system) STOT RE 2; H373 (Gastro-intestinal system) Aquatic Acute 1; H400 M-Factor (Acute aquatic toxicity): 100 specific concentration limit Skin Irrit. 2; H315 >= 2,5 %	>= 5 - < 10
Substances with a workplace exposure limit :			
(2-methoxymethylethoxy)propanol	34590-94-8 252-104-2		>= 50 - < 60

	01-2119450011-60-xxxx		

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 material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
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 : Clean mouth with water and drink afterwards plenty of water.
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

Symptoms : Gastrointestinal discomfort
Symptoms may be delayed.
Extremely corrosive and destructive to tissue.
tearing

Nasal irritation
Blurred vision
Irritation
Nausea
Redness

Risks : Harmful if swallowed.
Causes skin irritation.
Causes serious eye damage.

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 : Carbon dioxide (CO2)

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 : Carbon dioxide (CO2)
Carbon monoxide
Hydrocarbons
Bromine compounds
Bromine
Formaldehyde
Nitrogen oxides (NOx)
Amines

5.3 Advice for firefighters

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

Specific extinguishing methods : Standard procedure for chemical fires.

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.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.

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 : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For further information see Section 8 and Section 13 of the safety data sheet.
See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapors/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
To avoid spills during handling keep bottle on a metal tray.

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

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material. Keep away from open flames, hot surfaces and sources of ignition.

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 : No smoking. Keep in a well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

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

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
(2-methoxymethylethoxy)propanol	34590-94-8	TWA	50 ppm 308 mg/m3	2000/39/EC
	Further information: Identifies the possibility of significant uptake through the skin, Indicative			
		TLV-8hr	300 mg/m3	NL WG

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

Substance name	End Use	Routes of exposure	Potential health effects	Value
bronopol (INN)	Workers	Skin contact	Long-term systemic effects	2 mg/kg
	Consumers	Skin contact	Long-term systemic	0,7 mg/kg

			effects	
	Consumers	Ingestion	Long-term systemic effects	0,18 mg/kg
	Workers	Inhalation	Long-term systemic effects	3,5 mg/m3
	Consumers	Inhalation	Long-term systemic effects	0,6 mg/m3
	Workers	Inhalation	Acute systemic effects	10,5 mg/m3
	Workers	Inhalation	Long-term local effects, Acute local effects	2,5 mg/m3
	Workers	Dermal	Acute systemic effects	6 mg/kg
	Workers	Dermal	Acute local effects, Long-term local effects	0,008 mg/cm2
	Consumers	Dermal	Acute local effects, Long-term local effects	0,004 mg/cm2
	Consumers	Dermal	Acute systemic effects	2,1 mg/kg
	Consumers	Inhalation	Acute local effects, Long-term local effects	0,6 mg/m3
	Consumers	Inhalation	Acute local effects, Acute systemic effects	0,6 mg/m3
	Consumers	Ingestion	Acute systemic effects	0,5 mg/kg

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

Substance name	Environmental Compartment	Value
bronopol (INN)	Aquatic (freshwater)	0,01 mg/l
	Aquatic (marine water)	0,001 mg/l
	Aquatic (intermit. releases)	0,003 mg/l
	Sewage treatment plant	0,43 mg/l
	Sediment (freshwater)	0,041 mg/l
	Sediment (marine water)	0,003 mg/l
	Soil	0,5 mg/kg dry weight (d.w.)

8.2 Exposure controls

Engineering measures

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Eye/face protection	:	Tightly fitting safety goggles Eye wash bottle with pure water
Hand protection		
Material	:	butyl-rubber
Break through time	:	480 min
Glove thickness	:	> 0,5 mm
Remarks	:	The exact break through time can be obtained from the protective glove producer and this has to be observed. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Skin and body protection	:	Work uniform or laboratory coat.
Respiratory protection	:	In the case of vapour formation use a respirator with an approved filter within the capabilities of the respirator/filter combination. Where concentrations are above recommended limits or are unknown, or a cartridge type respirator is not adequate, wear a positive-pressure supplied-air respirator. Respiratory protection complying with EN 136. Respiratory protection complying with EN 140. Respiratory protection complying with EN 14387.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Color	:	yellow
Odor	:	noticeable
Odor Threshold	:	No data available
Melting point/freezing point	:	not determined
Boiling point/boiling range	:	> 100 °C
Upper explosion limit / Upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined
Flash point	:	80 °C
Decomposition temperature	:	No data available
pH	:	3 - 7 (20 °C)
Viscosity		
Viscosity, dynamic	:	not determined
Viscosity, kinematic	:	not determined
Solubility(ies)		
Water solubility	:	completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	not determined
Vapor pressure	:	< 20 hPa
Relative density	:	No data available
Density	:	1,05 - 1,07 g/cm3 (20 °C)
Relative vapor density	:	not determined

9.2 Other information

Oxidizing properties	:	Not applicable
Self-ignition	:	not determined
Evaporation rate	:	not determined
Molecular weight	:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Vapors may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid : Protect from frost, heat and sunlight.
Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents
Strong acids

10.6 Hazardous decomposition products

Hazardous decomposition products : Carbon monoxide
Carbon dioxide (CO2)
Hydrocarbons
Acetone
Nitrogen oxides (NOx)
hydrogen bromide
Carbon oxides
Hydrocarbons

SECTION 11: Toxicological information

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

Information on likely routes of exposure : Inhalation
Eye contact
Skin contact
Ingestion

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity : Acute toxicity estimate: 1.843 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Components:

bronopol (INN):

Acute oral toxicity : LD50 (Rat, female): 193 mg/kg
Method: OECD Test Guideline 401

LD50 (Rat, male): 211 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, male and female): > 0,588 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 1.000 - < 2.000 mg/kg
Method: OECD Test Guideline 402

tetradonium bromide:

Acute oral toxicity : LD50 (Rat): 390 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rabbit): 2.150 mg/kg
Remarks: Information given is based on data obtained from similar substances.

(2-methoxymethylethoxy)propanol:

Acute oral toxicity	:	LD50 (Rat): > 5.000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC0 (Rat, female): > 553 ppm Exposure time: 8 h Test atmosphere: vapor Method: OECD Test Guideline 403 Remarks: No mortality observed at this dose.
Acute dermal toxicity	:	LD50 (Rat): > 5.000 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Product:

Remarks	:	Extremely corrosive and destructive to tissue.

Components:

bronopol (INN):

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Irritating to skin.

tetradonium bromide:

Result	:	Irritating to skin.

(2-methoxymethylethoxy)propanol:

Species	:	Rabbit
Result	:	No skin irritation

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Remarks	:	May cause irreversible eye damage.

Components:

bronopol (INN):

Species	:	Rabbit
Method	:	Draize Test

Result : Corrosive

tetradonium bromide:

Result : Corrosive
Remarks : Information given is based on data obtained from similar substances.

(2-methoxymethylethoxy)propanol:

Species : Rabbit
Result : Slight, transient irritation

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Components:

bronopol (INN):

Species : Guinea pig
Assessment : Does not cause skin sensitization.

tetradonium bromide:

Test Type : Buehler Test
Species : Guinea pig
Assessment : Did not cause sensitization on laboratory animals.
Remarks : Information given is based on data obtained from similar substances.

(2-methoxymethylethoxy)propanol:

Species : Humans
Assessment : Does not cause skin sensitization.

Germ cell mutagenicity

Not classified based on available information.

Components:

bronopol (INN):

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: chromosome aberration assay
Species: Mouse
Result: negative

tetradonium bromide:

Genotoxicity in vitro : Remarks: In vitro tests did not show mutagenic effects
Information given is based on data obtained from similar substances.

Genotoxicity in vivo : Test Type: in vivo assay
Species: Rat
Cell type: Bone marrow
Result: In vivo tests did not show any chromosomal changes.
Remarks: Information given is based on data obtained from similar substances.

(2-methoxymethylethoxy)propanol:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

bronopol (INN):

Result : negative
Remarks : Not classified

Reproductive toxicity

Not classified based on available information.

Components:

bronopol (INN):

tetradonium bromide:

Effects on fetal development : Species: Rabbit
Application Route: Oral

Symptoms: No specific developmental abnormalities.

STOT-single exposure

Not classified based on available information.

Components:

bronopol (INN):

Assessment : May cause respiratory irritation.

tetradonium bromide:

Routes of exposure : inhalation (dust/mist/fume)
Target Organs : Respiratory Tract
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT-repeated exposure

Not classified based on available information.

Components:

tetradonium bromide:

Target Organs : Gastro-intestinal system
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Repeated dose toxicity

Components:

tetradonium bromide:

Species : Rat
NOAEL : 25 mg/kg
Application Route : Oral
Exposure time : 28-day
Target Organs : Gastro-intestinal system
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.
Remarks : Subchronic toxicity

Aspiration toxicity

Not classified based on available information.

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

Components:

(2-methoxymethylethoxy)propanol:

Remarks : Central nervous system

SECTION 12: Ecological information

12.1 Toxicity

Components:

bronopol (INN):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 41,2 mg/l
Exposure time: 96 h
Test Type: flow-through test

LC50 (Lepomis macrochirus (Bluegill sunfish)): 35,7 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1,4 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 0,37 mg/l
End point: Growth inhibition

Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

EC50 (Skeletonema costatum (marine diatom)): 0,25 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: ISO 10253

NOEC (Skeletonema costatum (marine diatom)): 0,08 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: ISO 10253

M-Factor (Acute aquatic toxicity) : 10

Toxicity to microorganisms : EC20 (activated sludge): 2 mg/l
Exposure time: 2,5 h
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 21,5 mg/l
Exposure time: 49 d
Species: Oncorhynchus mykiss (rainbow trout)
Test Type: flow-through test
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,27 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: flow-through test
Method: OECD Test Guideline 211

tetradonium bromide:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 1,81 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,022 mg/l
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202

Toxicity to algae/aquatic : EC50 (Pseudokirchneriella subcapitata (green algae)): 0,053

plants		mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	100
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EC50: 0,023 mg/l End point: Reproduction Test Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211 Remarks: Information given is based on data obtained from similar substances.

(2-methoxymethylethoxy)propanol:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): > 10.000 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia magna (Water flea)): 1.919 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 969 mg/l End point: Growth inhibition Exposure time: 72 h

12.2 Persistence and degradability

Components:

bronopol (INN):

Biodegradability	:	Inoculum: activated sludge Result: Readily biodegradable. Biodegradation: 70 - 80 % Exposure time: 28 d Method: OECD Test Guideline 301B
Chemical Oxygen Demand (COD)	:	600 mg/g Remarks: Chemical Oxygen Demand (COD)

tetradonium bromide:

Biodegradability	:	Result: Readily biodegradable.

Biodegradation: 100 %
Exposure time: 7 d
Method: OECD Test Guideline 301E

(2-methoxymethylethoxy)propanol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 75 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Chemical Oxygen Demand (COD) : 2,02 mg/g

ThOD : 2,06 mg/g

12.3 Bioaccumulative potential

Components:

bronopol (INN):

Partition coefficient: n-octanol/water : log Pow: 0,22 (24 °C)
pH: 7

tetradonium bromide:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.
Information given is based on data obtained from similar substances.

Partition coefficient: n-octanol/water : log Pow: 2,21

(2-methoxymethylethoxy)propanol:

Partition coefficient: n-octanol/water : log Pow: 0,004

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.

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.
Very toxic to aquatic life.
Harmful 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.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

SECTION 14: Transport information

14.1 UN number

RID: UN3082
INTERNATIONAL MARITIME DANGEROUS GOODS: UN3082
INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER: UN3082

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO: UN3082
ADR: UN3082
ADN: UN3082

14.2 UN proper shipping name

RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-BROMO-2-NITRO-1,3-PROPANEDIOL, CETYLTRIMETHYLAMMONIUM BROMIDE)
INTERNATIONAL MARITIME DANGEROUS GOODS: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-BROMO-2-NITRO-1,3-PROPANEDIOL, CETYLTRIMETHYLAMMONIUM BROMIDE)
INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER: Environmentally hazardous substance, liquid, n.o.s. (2-BROMO-2-NITRO-1,3-PROPANEDIOL, CETYLTRIMETHYLAMMONIUM BROMIDE)
INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO: Environmentally hazardous substance, liquid, n.o.s. (2-BROMO-2-NITRO-1,3-PROPANEDIOL, CETYLTRIMETHYLAMMONIUM BROMIDE)
ADR: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-BROMO-2-NITRO-1,3-PROPANEDIOL, CETYLTRIMETHYLAMMONIUM BROMIDE)
ADN: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2-BROMO-2-NITRO-1,3-PROPANEDIOL, CETYLTRIMETHYLAMMONIUM BROMIDE)

14.3 Transport hazard class(es)

RID: 9
INTERNATIONAL MARITIME DANGEROUS GOODS: 9
INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER: 9
INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO: 9
ADR: 9
ADN: 9

14.4 Packing group

RID: III
INTERNATIONAL MARITIME DANGEROUS GOODS: III
INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER: III
INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO: III
ADR: III
ADN: III

14.5 Environmental hazards

RID: Environmentally hazardous
INTERNATIONAL MARITIME DANGEROUS GOODS: Environmentally hazardous
INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER: Environmentally hazardous
INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO: Environmentally hazardous
ADR: Environmentally hazardous
ADN: Environmentally hazardous

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Ship Type: Not applicable
Hazard code(s): Not applicable
Pollutant Category: Not applicable

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

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 Authorization (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.	E1	ENVIRONMENTAL HAZARDS

General Assessment Methodology (GAM)

Aquatic harmfulness	:	B1	Highly toxic for aquatic organisms.

Abatement effort : B

Other regulations:

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

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

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

15.2 Chemical Safety Assessment

No data available

SECTION 16: Other information

Full text of H-Statements

H301	:	Toxic if swallowed.
H302	:	Harmful if swallowed.
H312	:	Harmful in contact with skin.
H315	:	Causes skin irritation.
H318	:	Causes serious eye damage.
H331	:	Toxic if inhaled.
H335	:	May cause respiratory irritation.
H373	:	May cause damage to organs through prolonged or repeated exposure.
H400	:	Very toxic to aquatic life.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Dam.	:	Serious eye damage
Skin Irrit.	:	Skin irritation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
NL WG	:	Netherlands. Law on Labour conditions - Occupational Exposure Limits
2000/39/EC / TWA	:	Limit Value - eight hours
NL WG / TLV-8hr	:	Time Weighted Average

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 carrying 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

Other information	:	This sds has been prepared by Ashland. (http://www.ashland.com)
Sources of key data used to compile the Material Safety Data Sheet	:	Ashland internal data including own and sponsored test reports European Union Law with content from the Official Journal of the European Union. European Chemicals Agency; the EU authority implementing the EU's chemicals legislation for companies. The German Water Hazard Classes. ReachCentrum; a series of support services to help comply with REACH regulations. The European Commission; proposing legislation, administering and implementing EU policies, and enforcing EU law. The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport. Cefic, the European Chemical Industry Council. ESIS European Chemical Substances Information System

Classification of the mixture:		**Classification procedure:**
Acute Tox. 4	H302	Calculation method
Skin Irrit. 2	H315	Calculation method
Eye Dam. 1	H318	Calculation method
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 3	H412	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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