

Nobilis Salenvac Formulation

Version Revision Date: SDS Number: Date of last issue: 06.04.2024 4.0 28.09.2024 7409621-00010 Date of first issue: 13.11.2020

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

1.1 Product identifier

Trade name : Nobilis Salenvac Formulation

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

Use of the Sub-

stance/Mixture

: Veterinary medicine

Recommended restrictions

on use

Not applicable

1.3 Details of the supplier of the safety data sheet

Company : MSD

20 Spartan Road

1619 Spartan, South Africa

Telephone : +27119239300

E-mail address of person

responsible for the SDS

: EHSDATASTEWARD@msd.com

1.4 Emergency telephone number

+1-908-423-6000

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.

Precautionary statements : Prevention:

P272 Contaminated work clothing should not be allowed out

of the workplace.

P280 Wear protective gloves.



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Response:

P333 + P313 If skin irritation or rash occurs: Get medical

advice/ attention.

P362 + P364 Take off contaminated clothing and wash it

before reuse.

Hazardous components which must be listed on the label:

Maleic acid

Formaldehyde

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name Antigen	CAS-No. EC-No. Index-No. Registration number Not Assigned	Classification	Concentration (% w/w) 4 - <= 12
Maleic acid	110-16-7 203-742-5 607-095-00-3	Acute Tox. 4; H302 Acute Tox. 4; H312 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1; H317 STOT SE 3; H335	0,23
Formaldehyde	50-00-0 200-001-8 605-001-00-5 01-2119488953-20	Flam. Gas 1B; H221 Acute Tox. 3; H301 Acute Tox. 2; H330 Acute Tox. 3; H311 Skin Corr. 1B; H314 Eye Dam. 1; H318 Skin Sens. 1A; H317 Muta. 2; H341 Carc. 1B; H350 STOT SE 3; H335	<= 0,025
Thiomersal	54-64-8 200-210-4 080-004-00-7	Acute Tox. 2; H300 Acute Tox. 2; H330 Acute Tox. 1; H310 Repr. 1B; H360 STOT RE 1; H372 (Central nervous	<= 0,013



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			system, Cardiovascular system, Gastrointestinal tract, Kidney) Aquatic Acute 1; H400 Aquatic Chronic 1; H410
			M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

Protection of first-aiders First Aid responders should pay attention to self-protection,

> and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

If inhaled If inhaled, remove to fresh air.

Get medical attention if symptoms occur.

In case of skin contact In case of contact, immediately flush skin with soap and plenty

of water.

Remove contaminated clothing and shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eve contact Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed If swallowed, DO NOT induce vomiting.

Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

Risks : May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.



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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray

> Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-

fighting

: Exposure to combustion products may be a hazard to health.

Hazardous combustion prod- : Carbon oxides

ucts

5.3 Advice for firefighters

Special protective equipment:

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment.

Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Personal precautions

Follow safe handling advice (see section 7) and personal pro-

tective equipment recommendations (see section 8).

6.2 Environmental precautions

Environmental precautions Avoid release to the environment.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up Soak up with inert absorbent material.

For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.



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Clean up remaining materials from spill with suitable absor-

bent.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are problem.

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

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

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Do not get on skin or clothing.

Avoid breathing mist or vapours.

Do not swallow.

Avoid contact with eyes.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

sessment

Take care to prevent spills, waste and minimize release to the

environment.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye

flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace.

Wash contaminated clothing before re-use.

The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the

use of administrative controls.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Keep in properly labelled containers. Store in accordance with

the particular national regulations.

Advice on common storage : Do not store with the following product types:

Strong oxidizing agents

Gases

7.3 Specific end use(s)

Specific use(s) : No data available



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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form	Control parameters	Basis
		of exposure)	p an annual and	
Formaldehyde	50-00-0	OEL- ML	0,2 ppm	ZA OEL
,	Further inform	ation: Occupational	Exposure Limits - Maximum	Limits For
	Hazardous Chemical Agents, dermal sensitisation, potential to produce der-			
	mal sensitisation, respiratory sensitisation, potential to produce respiratory			
			city, which is based on GHS	
	including cate	gory 1A, 1B	-	_
		OEL - ML	0,6 ppm	ZA OEL
		STEL/C		
	Further information: Occupational Exposure Limits - Maximum Limits For			
	Hazardous Chemical Agents, dermal sensitisation, potential to produce der-			
	mal sensitisation, respiratory sensitisation, potential to produce respiratory			
	sensitisation, denotes carcinogenicity, which is based on GHS categorisation,			
	including category 1A, 1B			
		TWA	0,3 ppm	2004/37/EC
		0.7-1	0,37 mg/m3	0004/07/50
		STEL	0,6 ppm	2004/37/EC
Th'	54.04.0	OFI DI	0,74 mg/m3	74.051
Thiomersal	54-64-8	OEL-RL	0,02 mg/m3	ZA OEL
	C		(Mercury)	
	Further information: danger of cutaneous absorption, Occupational Exposure			
	Limits - Restricted Limits For Hazardous Chemical Agents, denotes carcino-			
	gernoity, writer	enicity, which is based on GHS categorisation, including category 1A, 1B OEL- RL STEL/C 0,06 mg/m3 ZA OEL		
		OEL- KL SIEL/C	(Mercury)	ZA UEL
	Further information: danger of cutaneous absorption, Occupational Exposure			
	Limits - Restricted Limits For Hazardous Chemical Agents, denotes carcino-			
	genicity, which is based on GHS categorisation, including category 1A, 1B			

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Maleic acid	Workers	Inhalation	Long-term systemic effects	3 mg/m3
	Workers	Inhalation	Acute systemic effects	3 mg/m3
	Workers	Inhalation	Long-term local ef- fects	3 mg/m3
	Workers	Inhalation	Acute local effects	3 mg/m3
Formaldehyde	Workers	Inhalation	Long-term systemic effects	9 mg/m3
	Workers	Inhalation	Long-term local ef- fects	0,375 mg/m3
	Workers	Inhalation	Acute local effects	0,75 mg/m3
	Workers	Skin contact	Long-term systemic effects	240 mg/kg bw/day



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	Workers	Skin contact	Long-term local ef- fects	0,037 mg/cm2
	Consumers	Inhalation	Long-term systemic effects	3,2 mg/m3
	Consumers	Inhalation	Long-term local ef- fects	0,1 mg/m3
	Consumers	Skin contact	Long-term systemic effects	102 mg/kg bw/day
I	Consumers	Skin contact	Long-term local ef- fects	0,012 mg/cm2
	Consumers	Ingestion	Long-term systemic effects	4,1 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
Maleic acid	Fresh water	0,1 mg/l
	Freshwater - intermittent	0,428 mg/l
	Marine water	0,01 mg/l
	Sewage treatment plant	44,6 mg/l
	Fresh water sediment	0,334 mg/kg dry weight (d.w.)
	Marine sediment	0,033 mg/kg dry weight (d.w.)
	Soil	0,042 mg/kg dry weight (d.w.)
Formaldehyde	Fresh water	0,44 mg/l
	Freshwater - intermittent	4,44 mg/l
	Marine water	0,44 mg/l
	Sewage treatment plant	0,19 mg/l
	Fresh water sediment	2,3 mg/kg dry weight (d.w.)
	Marine sediment	2,3 mg/kg dry weight (d.w.)
	Soil	0,2 mg/kg dry weight (d.w.)

8.2 Exposure controls

Engineering measures

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections).

All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.

Laboratory operations do not require special containment.

Personal protective equipment

Eye/face protection : Wear safety glasses with side shields or goggles.

If the work environment or activity involves dusty conditions,

mists or aerosols, wear the appropriate goggles.

Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or

aerosols.

Hand protection

Material : Chemical-resistant gloves



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Skin and body protection : Work uniform or laboratory coat.

Respiratory protection : If adequate local exhaust ventilation is not available or expo-

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection.

Filter type : Particulates type (P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : suspension Colour : cream

Odour : No data available Odour Threshold : No data available

pH : 6,6 - 7,0

Melting point/freezing point : No data available

Initial boiling point and boiling

range

Flash point

: No data available

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Upper explosion limit / Upper

flammability limit

No data available

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapour pressure : Not applicable

Relative vapour density : Not applicable

Relative density : ca. 1

Density : ca. 1 g/cm³

similar to water

Solubility(ies)

Water solubility : soluble

Partition coefficient: n- : No data available

octanol/water

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : Not applicable

Explosive properties : Not explosive



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Oxidizing properties The substance or mixture is not classified as oxidizing.

9.2 Other information

No data available Flammability (liquids)

Particle size No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on likely routes of: Inhalation Skin contact exposure

Ingestion

Eye contact

Acute toxicity

Not classified based on available information.

Components:

Maleic acid:

Acute oral toxicity : LD50 (Rat): > 300 - 2.000 mg/kg

Method: OECD Test Guideline 401

Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): 1.560 mg/kg

Formaldehyde:

Acute oral toxicity : Acute toxicity estimate: 100 mg/kg



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Method: Expert judgement

Remarks: Based on national or regional regulation.

Acute inhalation toxicity : Acute toxicity estimate (Rat): 100 ppm

Exposure time: 4 h Test atmosphere: gas Method: Expert judgement

Acute dermal toxicity : LD50 (Rabbit): 270 mg/kg

Thiomersal:

Acute oral toxicity : LD50 (Rat): 75 mg/kg

Acute toxicity estimate: 10 mg/kg Method: Expert judgement

Remarks: Based on national or regional regulation.

Acute inhalation toxicity : Acute toxicity estimate: 0,1 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Expert judgement

Remarks: Based on national or regional regulation.

Acute dermal toxicity : Acute toxicity estimate: 10 mg/kg

Method: Expert judgement

Remarks: Based on national or regional regulation.

Skin corrosion/irritation

Not classified based on available information.

Components:

Maleic acid:

Species : in vitro membrane barrier

Method : OECD Test Guideline 435

Result : Corrosive after 3 minutes to 1 hour of exposure

Formaldehyde:

Result : Corrosive after 3 minutes to 1 hour of exposure Remarks : Based on national or regional regulation.

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Maleic acid:

Result : Irreversible effects on the eye Remarks : Based on skin corrosivity.

Formaldehyde:



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Result : Irreversible effects on the eye Remarks : Based on skin corrosivity.

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:

Maleic acid:

Test Type : Maximisation Test Exposure routes : Skin contact Species : Guinea pig

Method : OECD Test Guideline 406

Result : positive

Assessment : Probability or evidence of skin sensitisation in humans

Formaldehyde:

Test Type : Human repeat insult patch test (HRIPT)

Exposure routes : Skin contact
Species : Humans
Result : positive

Assessment : Probability or evidence of high skin sensitisation rate in hu-

mans

Germ cell mutagenicity

Not classified based on available information.

Components:

Maleic acid:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Formaldehyde:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: positive

Test Type: In vitro mammalian cell gene mutation test

Result: positive

Test Type: Chromosome aberration test in vitro

Result: positive



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Genotoxicity in vivo : Test Type: In vivo mammalian alkaline comet assay

Species: Mouse

Application Route: Inhalation

Result: positive

Germ cell mutagenicity- As-

sessment

Positive result(s) from in vivo mammalian somatic cell muta-

genicity tests.

Thiomersal:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Genotoxicity in vivo : Test Type: Mammalian spermatogonial chromosome aberra-

tion test (in vivo) Species: Mouse

Application Route: Ingestion

Result: negative

Carcinogenicity

Not classified based on available information.

Components:

Maleic acid:

Species : Rat
Application Route : Ingestion
Exposure time : 2 Years
Result : negative

Remarks : Based on data from similar materials

Formaldehyde:

Species : Rat

Application Route : inhalation (gas)
Exposure time : 28 Months
Result : positive

Carcinogenicity - Assess-

ment

: Sufficient evidence of carcinogenicity in animal experiments

Thiomersal:

Species : Rat
Exposure time : 1 Years
Result : negative

Reproductive toxicity

Not classified based on available information.

Components:

Maleic acid:

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Rat



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Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Formaldehyde:

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: inhalation (gas)

Result: negative

Thiomersal:

Effects on foetal develop-

ment

Species: Rat

Application Route: Ingestion

Result: positive

Remarks: Based on data from similar materials

Reproductive toxicity - As-

sessment

: Clear evidence of adverse effects on sexual function and fertil-

ity, and/or on development, based on animal experiments

STOT - single exposure

Not classified based on available information.

Components:

Maleic acid:

Assessment : May cause respiratory irritation.

Remarks : Based on national or regional regulation.

Formaldehyde:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Components:

Thiomersal:

Target Organs : Central nervous system, Cardio-vascular system, Gastrointes-

tinal tract, Kidney

Assessment : Causes damage to organs through prolonged or repeated

exposure.



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Repeated dose toxicity

Components:

Thiomersal:

Species : Rat

LOAEL : >= 0,5 mg/kg
Application Route : Ingestion

Remarks : Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Maleic acid:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): > 10 - 100

mg/l

Exposure time: 96 h

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 42,81 mg/l

Exposure time: 48 h

Test substance: Neutralised product Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

mg/l Exposure time: 72 h

Test substance: Neutralised product Method: OECD Test Guideline 201

EC10 (Pseudokirchneriella subcapitata (green algae)): 11,8

ErC50 (Pseudokirchneriella subcapitata (green algae)): 74,35

mg/l

Exposure time: 72 h

Test substance: Neutralised product Method: OECD Test Guideline 201

Toxicity to microorganisms : EC10 (Pseudomonas putida): 44,6 mg/l

Exposure time: 18 h

Test substance: Neutralised product

Method: DIN 38 412 Part 8

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC: > 1 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

Remarks: Based on data from similar materials

Formaldehyde:



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Toxicity to fish : LC50 (Morone saxatilis (striped bass)): 6,7 mg/l

Exposure time: 96 h

Toxicity to daphnia and other:

aquatic invertebrates

EC50 (Daphnia pulex (Water flea)): 5,8 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

: ErC50 (Desmodesmus subspicatus (green algae)): 4,89 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to microorganisms EC50 (activated sludge): 19 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC: 1,04 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211

Thiomersal:

Toxicity to fish LC50 (Poecilia reticulata (guppy)): > 0,01 - 0,1 mg/l

Exposure time: 96 h

Remarks: Based on data from similar materials

Toxicity to daphnia and other:

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 0,01 - 0,1 mg/l

Exposure time: 48 h

Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

EC50 (Pseudokirchneriella subcapitata (green algae)): > 0,01

- 0,1 mg/l

Exposure time: 96 h

Remarks: Based on data from similar materials

M-Factor (Acute aquatic tox- :

icity)

Toxicity to daphnia and other : NOEC: > 0,001 - 0,01 mg/l

aquatic invertebrates (Chron-

ic toxicity)

Exposure time: 21 d

Species: Daphnia sp. (water flea)

Remarks: Based on data from similar materials

M-Factor (Chronic aquatic

toxicity)

10

12.2 Persistence and degradability

Components:

Maleic acid:

Biodegradability Result: Readily biodegradable.

Biodegradation: 97 % Exposure time: 28 d

Method: OECD Test Guideline 301B

Formaldehyde:



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Biodegradability : Result: Readily biodegradable.

Biodegradation: 99 % Exposure time: 28 d

Method: OECD Test Guideline 301A

12.3 Bioaccumulative potential

Components:

Maleic acid:

Partition coefficient: n-

octanol/water

log Pow: -1,3

Formaldehyde:

Partition coefficient: n-

octanol/water

: log Pow: 0,35

Remarks: Calculation

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 Other adverse effects

Product:

Endocrine disrupting poten-

tial

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 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.

According to the European Waste Catalogue, Waste Codes

are not product specific, but application specific.

Waste codes should be assigned by the user, preferably in

discussion with the waste disposal authorities.

Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.



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SECTION 14: Transport information

14.1 UN number

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.4 Packing group

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA (Cargo) : Not regulated as a dangerous good
IATA (Passenger) : Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

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

Remarks : 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

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

AICS : not determined

DSL : not determined

IECSC : not determined

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Other information : Items where changes have been made to the previous version

are highlighted in the body of this document by two vertical

lines.

Full text of H-Statements

H221 : Flammable gas.
H300 : Fatal if swallowed.
H301 : Toxic if swallowed.
H302 : Harmful if swallowed.
H310 : Fatal in contact with skin.
H311 : Toxic in contact with skin.
H312 : Harmful in contact with skin.

H314 : Causes severe skin burns and eye damage.

H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.

H330 : Fatal if inhaled.

H335 : May cause respiratory irritation. H341 : Suspected of causing genetic defects.

H350 : May cause cancer.

H360 : May damage fertility or the unborn child.

H372 : Causes damage to organs through prolonged or repeated

exposure.

H400 : Very toxic to aquatic life.

H410 : Very 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

Carc. : Carcinogenicity
Eye Dam. : Serious eye damage
Flam. Gas : Flammable gases
Muta. : Germ cell mutagenicity
Repr. : Reproductive toxicity

Skin Corr. : Skin corrosion



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Skin Sens. : Skin sensitisation

STOT RE : Specific target organ toxicity - repeated exposure STOT SE : Specific target organ toxicity - single exposure

2004/37/EC : Europe. Directive 2004/37/EC on the protection of workers

from the risks related to exposure to carcinogens or mutagens

at work

ZA OEL : South Africa. The Regulations for Hazardous Chemical

Agents, Occupational Exposure Limits

2004/37/EC / STEL : Short term exposure limit 2004/37/EC / TWA : Long term exposure limit

ZA OEL / OEL- ML : Occupational Exposure Limit Maximum limit - 8- hour expo-

sure or equivalent (12 hour shifts).

ZA OEL / OEL - ML STEL/C : Occupational Exposure Limit Maximum limit - Short term oc-

cupational exposure limits / ceiling limits

ZA OEL / OEL-RL : Occupational Exposure Limit Restricted limit - 8- hour expo-

sure or equivalent (12 hour shifts)

ZA OEL / OEL- RL STEL/C : Occupational Exposure Limit Restricted limit - Short term oc-

cupational exposure limits / ceiling limits

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; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

Sources of key data used to compile the Safety Data

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-



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Sheet cy, http://echa.europa.eu/

Classification of the mixture: Classification procedure:

Skin Sens. 1 H317 Calculation method

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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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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