



Safety Data Sheet version 4.0 dated 30/8/2021

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

1.1. Product identifier

Trade name:

NUTRI-GEMMA B-Zn

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

Recommended use:

Liquid fertiliser for agricultural use.

1.3. Details of the supplier of the safety data sheet

Company:

Biolchim S.p.A. - Via San Carlo 2130 - 40059 Medicina (BO) - Italy

Biolchim spa - tel 051 6971811

NZ Supplier:

Biolchim NZ Ltd – PO Box 5451, Mt Maunganui, 3150, New Zealand – Phone 027 272 0799

Competent person responsible for the safety data sheet:

biolchim@biolchim.it

1.4. Emergency telephone number

0800 764 766 (National Poison Centre)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

HSNO Hazard Classification:

Classified as hazardous according to Regulation (EC) No. 1272/2008 [CLP] which meets New Zealand jurisdiction criteria as per EPA Hazardous Substances (Safety Data Sheets) Notice 2017 Part B Clause 9.

EPA Approval No: Fertilisers (Subsidiary Hazard) Group Standard 2020 – HSR002571

EC regulation criteria 1272/2008 (CLP)



Warning, Skin Irrit. 2, Causes skin irritation.



Danger, Eye Dam. 1, Causes serious eye damage.



Warning, STOT SE 3, May cause respiratory irritation.



Aquatic Chronic 2, Toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements:

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- P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P103 Read carefully and follow all instructions.
 P271 Use only outdoors or in a well-ventilated area.
 P273 Avoid release to the environment.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor.
 P391 Collect spillage.
 P405 Store locked up.
 P501 Dispose of contents in accordance with local regulation.

Special Provisions:

None

Contains

zinc chloride

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$

Other Hazards:

No other hazards







SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Number	Classification
$\geq 10\%$ - $< 12.5\%$	zinc chloride	Index number: 030-003-00-2 CAS: 7646-85-7 EC: 231-592-0 REACH No.: 01-2119472431-44	 3.1/4/Oral Acute Tox. 4 H302  3.2/1B Skin Corr. 1B H314  3.8/3 STOT SE 3 H335  4.1/A1 Aquatic Acute 1 H400  4.1/C1 Aquatic Chronic 1 H410 Specific Concentration Limits: C $\geq 5\%$: STOT SE 3 H335
$\geq 7\%$ - $< 10\%$	Citric acid	CAS: 77-92-9 EC: 201-069-1 REACH No.: 01-2119457026-42	 3.3/2 Eye Irrit. 2 H319

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water for at least 30 min.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for at least 60 min., then consult an ophthalmologist immediately. If possible, remove any contact lenses.

After contact with the eyes, rinse with water with the eyelids open for at least 30 min., then consult an ophthalmologist immediately. If possible, remove any contact lenses.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting.

Seek immediate medical attention.

Do not give anything that is not expressly authorized by your doctor.

In case of Inhalation:

In case of inhalation, consult a doctor immediately and show him packing or label.

First aid self-protection:

Adopt adequate precautions for the rescuer in accordance with the contents of the first aid kit (Ministerial Decree No. 388/2003)

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

There are no known specific episodes on symptoms caused by the product.

For possible effects due to product exposure, please refer to the hazard warnings in section 2.

For information on the substances contained, see sections 3 and 11.

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

In the event of an accident or discomfort, immediately consult a POISON CENTER / doctor (if possible, show the instructions for use or the safety data sheet).

Treatment:

No specific treatments related to the product are known. Contact specialized medical personnel.

For information on the substances contained, see sections 3 and 11.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Carbon dioxide, foam, powder and water.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Cool the containers with jets of water.

Always wear full fire protection equipment.

Collect the extinguishing water which must not be fed into the sewers.

Dispose of the contaminated water used for extinguishing and the residue of the fire according to current regulations.

EQUIPMENT:

Normal clothing for firefighting, such as an open circuit compressed air breathing apparatus (EN 137), flame retardant suit (EN 469), flame retardant gloves (EN 659) and fire brigade boots (HO A29 or A30).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.



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- Provide adequate ventilation.
Use appropriate respiratory protection.
See protective measures under point 7 and 8.
- 6.2. Environmental precautions
Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
Suitable material for taking up: absorbing material, organic, sand
- 6.3. Methods and material for containment and cleaning up
For containment:
Collect the product for re-use, if possible, or for disposal.
For recovery or disposal, vacuum or clean and place in appropriate labeled containers.
For cleaning up:
Provide sufficient ventilation of the place affected by the leak. Disposal of contaminated material must be carried out in accordance with the provisions of section 13.
Clear spills immediately
- 6.4. Reference to other sections
Any information regarding personal protection and disposal is given in sections 8 and 13.
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SECTION 7: Handling and storage

- 7.1. Precautions for safe handling
Handle the product after consulting all the other sections of this safety data sheet.
Avoid the dispersion of the product in the environment outside the indicated uses.
Avoid contact with skin and eyes, inhalation of vapors and mists.
See also section 8 for recommended protective equipment.
Do not use empty containers before they have been cleaned.
Before transferring operations, make sure that there are no incompatible residual materials in the containers.
Advice on general occupational hygiene:
Do not eat, drink or smoke when using this product.
Wash hands after use
Contaminated clothing should be changed before entering eating areas.
- 7.2. Conditions for safe storage, including any incompatibilities
Keep the product in clearly labeled containers.
Store with care and attention, avoiding precarious storage.
Keep the containers closed in a well-ventilated place.
Store the containers in a dry place away from sunlight or other atmospheric agents.
Keep away from food, drink and feed.
Incompatible materials:
See the following paragraph 10.
Instructions as regards storage premises:
Cool and adequately ventilated.
- 7.3. Specific end use(s)
Refer to section 1.2
-

SECTION 8: Exposure controls/personal protection

- 8.1. Control parameters
zinc chloride - CAS: 7646-85-7
ACGIH - TWA(8h): 1 mg/m³ - STEL: 2 mg/m³ - Notes: LRT and URT irr
National - TWA(8h): 1 mg/m³ - STEL: 2 mg/m³ - Notes: Belgium, Spain, UK
National - TWA(8h): 0.5 mg/m³ - STEL: 1 mg/m³ - Notes: Denmark
National - TWA(8h): 1 mg/m³ - Notes: France, Sweden, Finland
Citric acid - CAS: 77-92-9

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DFG - TWA: 2 mg/m³ - STEL(15 min): 4 mg/m³ - Notes: inhalable fraction and vapour
DNEL Exposure Limit Values

zinc chloride - CAS: 7646-85-7

Worker Industry: 1 mg/m³ - Worker Professional: 1 mg/m³ - Consumer: 1.25 mg/m³ -

Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 8.3 mg/kg body mass/day - Worker Professional: 8.3 mg/kg body mass/day - Consumer: 8.3 mg/kg body mass/day - Exposure: Human Dermal -

Frequency: Long Term, systemic effects

Consumer: 0.83 mg/kg body mass/day - Exposure: Human Oral - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

zinc chloride - CAS: 7646-85-7

Target: Fresh Water - Value: 20.6 µg/l

Target: Marine water - Value: 6.1 µg/l

Target: Freshwater sediments - Value: 117.8 mg/kg sediment dw

Target: Marine water sediments - Value: 56.5 mg/kg sediment dw

Target: Soil (agricultural) - Value: 35.6 mg/kg soil dw

Target: STP - Value: 100 µg/l

Citric acid - CAS: 77-92-9

Target: Fresh Water - Value: 0.44 mg/l

Target: Marine water - Value: 0.044 mg/l

Target: STP - Value: 1000 mg/l

Target: Freshwater sediments - Value: 34.6 mg/kg sediment dw

Target: Marine water sediments - Value: 3.46 mg/kg sediment dw

Target: Soil - Value: 33.1 mg/kg soil dw

8.2. Exposure controls

Eye protection:

Make fixed or portable eye-wash devices available near the area of use

Face protection shield.

(see standard EN 166)

Protection for skin:

Disposable suit.

(see standard EN 13034)

Safety shoes.

(see standard UNI EN ISO 20345)

Protection for hands:

Suitable gloves type:

One-time gloves.

Suitable material:

NBR (nitrile rubber).

(see standard EN 374)

Wash hands before eating, drinking or smoking.

Respiratory protection:

Half mask (EN 405: 2001).

Half-face mask with filter "A" "B" "E" "K" "P" - P3 (EN 14387; EN 143)

Avoid inhaling the product.

Provide adequate ventilation. Good local ventilation and a good general air exchange system must be ensured.

Thermal Hazards:

None

Environmental exposure controls:

Prevent entry into surface water or soil.

Do not discharge the product into the sewers.

Appropriate engineering controls:

Ensure adequate ventilation, especially in confined areas.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Physical state:	Liquid	--	--
Colour:	Yellow	--	--
Odour:	Not Relevant	--	Not relevant for product classification purposes.
Melting point/freezing point:	Not Relevant	--	Freezing point lower than the temperature range of use of the product.
Boiling point or initial boiling point and boiling range:	Not Relevant	--	Boiling point higher than the temperature range of use of the product.
Flammability:	Non-flammable	--	--
Lower and upper explosion limit:	N.A.	--	Not flammable.
Flash point:	N.A.	--	NOT FLAMMABLE: water-based mixture consisting of inorganic components (Annex VII REACH) and / or non-flammable organic components.
Auto-ignition temperature:	N.A.	--	Not flammable.
Decomposition temperature:	Not Relevant	--	Decomposition temperature higher than the temperature range of use of the product.
pH (20°C):	8.5	--	--
Kinematic viscosity:	Not Relevant	--	Not relevant for product classification purposes
Solubility in water:	Soluble	--	--
Solubility in oil:	Not Relevant	--	Not relevant for classification and use of the product.
Partition coefficient n-octanol/water (log value):	N.A.	--	See paragraph 12 for values referring to individual substances.
Vapour pressure:	Not Relevant	--	Not relevant for product classification purposes.
Density and/or relative density:	1.36 kg/l	--	--
Relative vapour density:	Not Relevant	--	Not relevant for product classification purposes.

Particle characteristics:

Particle size:	N.A.	--	--
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9.2. Other information

Properties	Value	Method:	Notes
Miscibility:	Mixable with water	--	--
Conductivity (25°C):	3.1 mS/cm (sol. 1% w/w)	--	--

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

- Substances Information:
N.A.
- 10.2. Chemical stability
Stable under normal conditions
Substances Information:
N.A.
- 10.3. Possibility of hazardous reactions
None
Substances Information:
zinc chloride - CAS: 7646-85-7
Reactions with alkalis (alkaline solutions).
- 10.4. Conditions to avoid
Stable under normal conditions.
Substances Information:
zinc chloride - CAS: 7646-85-7
Exposure to moisture.
High temperatures
Citric acid - CAS: 77-92-9
Avoid the generation of dust when handling the product and avoid any possible source of ignition (spark or flame).
Avoid the accumulation of electrostatic charges.
To avoid fire and explosion, dissipate static electricity during transfer by grounding and grounding containers and equipment before transferring material.
- 10.5. Incompatible materials
None in particular.
Substances Information:
zinc chloride - CAS: 7646-85-7
Metals
Cyanides and sulphides.
Citric acid - CAS: 77-92-9
Oxidizing or reducing agents
Acids and alkalis
- 10.6. Hazardous decomposition products
According to the data in our possession, no one in particular to report.
Substances Information:
N.A.

SECTION 11: Toxicological information

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

Toxicological information of the product:

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a) acute toxicity

Not classified

Based on available data, the classification criteria are not met

ATEmix - Oral 10328,6 mg/kg bw

b) skin corrosion/irritation

The product is classified: Skin Irrit. 2 H315

c) serious eye damage/irritation

The product is classified: Eye Dam. 1 H318

d) respiratory or skin sensitisation

Not classified

Based on available data, the classification criteria are not met

e) germ cell mutagenicity

Not classified

Based on available data, the classification criteria are not met

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- f) carcinogenicity
 - Not classified
 - Based on available data, the classification criteria are not met
 - g) reproductive toxicity
 - Not classified
 - Based on available data, the classification criteria are not met
 - h) STOT-single exposure
 - The product is classified: STOT SE 3 H335
 - i) STOT-repeated exposure
 - Not classified
 - Based on available data, the classification criteria are not met
 - j) aspiration hazard
 - Not classified
 - Based on available data, the classification criteria are not met
- Toxicological information of the main substances found in the product:
- zinc chloride - CAS: 7646-85-7
 - a) acute toxicity:
 - Test: LD50 - Route: Oral - Species: Rat 1100 mg/kg
 - Test: LC50 - Route: Inhalation - Species: Rat 2000 mg/m³
 - Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg
 - b) skin corrosion/irritation:
 - Test: Skin Corrosive Positive
 - c) serious eye damage/irritation:
 - Test: Eye Corrosive Positive
 - e) germ cell mutagenicity:
 - Negative - Source: Ames-test
 - Citric acid - CAS: 77-92-9
 - a) acute toxicity:
 - Test: LD50 - Route: Oral - Species: Mouse 5400 mg/kg - Source: OECD 401 (Roche 1981)
 - Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg - Source: OECD 401 (Safepharma, 1996; rel 1)
 - Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg bw - Source: OECD 402
 - b) skin corrosion/irritation:
 - Test: Skin Irritant - Species: Rabbit Negative - Duration: 72h - Source: OECD 404 (Haarman & Reimer, 1990)
 - c) serious eye damage/irritation:
 - Test: Eye Irritant - Species: Rabbit Positive - Duration: 72h - Source: OECD 405
 - Fortemente irritante agli occhi (Roche, 1984)
 - e) germ cell mutagenicity:
 - Test: Genotoxicity - Species: Generic Bacteria Negative - Source: OECD 471 OECD 487
 - f) carcinogenicity:
 - Test: Carcinogenicity - Route: Oral - Species: Rat Negative
 - i) STOT-repeated exposure:
 - Test: NOAEL - Route: Oral - Species: Rat 4000 mg/kg bw/day - Duration: 10D
- 11.2. Information on other hazards
- Endocrine disrupting properties:
 - No endocrine disruptor substances present in concentration $\geq 0.1\%$

SECTION 12: Ecological information

12.1. Toxicity

- Adopt good working practices, so that the product is not released into the environment.
- NUTRI-GEMMA B-Zn

The product is classified: Aquatic Chronic 2 - H411
zinc chloride - CAS: 7646-85-7

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Daphnia 1220 µg/l - Duration h: 48 - Notes: (as Zn) -
Daphnia magna

Endpoint: LC50 - Species: Fish 439 µg/l - Duration h: 96 - Notes: (as Zn)

Endpoint: LC50 - Species: Fish 0.78 mg/l - Duration h: 96 - Notes: (as Zn) - Pimephales
promelas

Endpoint: LC50 - Species: Fish 0.169 mg/l - Duration h: 96 - Notes: (as Zn) -

Oncorhynchus mykiss

Endpoint: IC50 - Species: Algae 0.136 mg/l - Duration h: 72 - Notes: (as Zn) -

Selenastrum capricornutum

Endpoint: EC50 - Species: Daphnia 0.147 mg/l - Duration h: 48 - Notes: (as Zn) -

Ceriodaphnia dubia

Citric acid - CAS: 77-92-9

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia 1535 mg/l - Duration h: 24

Endpoint: LC50 - Species: Fish 440 mg/l - Duration h: 96 - Notes: Leuciscus idus

12.2. Persistence and degradability

None

Citric acid - CAS: 77-92-9

Biodegradability: Easily biodegradable - Duration h: 48h - Notes: 98% - dose 600mg/L

12.3. Bioaccumulative potential

Citric acid - CAS: 77-92-9

Bioaccumulation: Not bioaccumulative - Test: BCF - Bioconcentration factor 0.01 -

Notes: bassa

Bioaccumulation: Not bioaccumulative - Test: Log Pow -1.72 - Notes: bassa

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration \geq 0.1%

12.7. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Do not dispose of the unused product and the container in the environment.

The dangerousness of the waste that partially contains this product must be evaluated according to the laws in force.

Disposal must be entrusted to an authorized waste management company, in compliance with national and possibly local regulations.

CONTAMINATED PACKAGING:

Contaminated packaging must be sent for recovery or disposal in compliance with national waste management regulations.

SECTION 14: Transport information

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012

14.1. UN number or ID number

ADR-UN number: 3082

IATA-Un number: 3082

IMDG-Un number: 3082

14.2. UN proper shipping name

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- | | |
|----------------------|--|
| ADR-Shipping Name: | Materia pericolosa per l'ambiente, liquida, n.a.s. (Contiene Zinco Cloruro in soluzione) |
| IATA-Technical name: | Environmentally hazardous substance, liquid, n.o.s. (Contains Zinc Chloride solution) |
| IMDG-Technical name: | Environmentally hazardous substance, liquid, n.o.s. (Contains Zinc Chloride solution) |
- 14.3. Transport hazard class(es)
- | | |
|-------------------------------------|----------------|
| ADR-Class: | 9 |
| ADR-Label: | 9 + P ambiente |
| ADR - Hazard identification number: | 90 |
| IATA-Class: | 9 |
| IATA-Label: | 9 |
| IMDG-Class: | 9 |
- 14.4. Packing group
- | | |
|---------------------|-----|
| ADR-Packing Group: | III |
| IATA-Packing group: | III |
| IMDG-Packing group: | III |
- 14.5. Environmental hazards
- | | |
|-------------------|------------------|
| Marine pollutant: | Marine pollutant |
| IMDG-EMS: | F-A, S-F |
- 14.6. Special precautions for user
- | | |
|---|---|
| ADR-Transport category (Tunnel restriction code): | E |
| Rail (RID): | 9 |
| IATA-Passenger Aircraft: | 964 |
| IATA-Cargo Aircraft: | 964 |
| IMDG-Technical name: | Environmentally hazardous substance, liquid, n.o.s. (Contains Zinc Chloride solution) |
- 14.7. Maritime transport in bulk according to IMO instruments
N.A.

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Classified as hazardous according to Regulation (EC) No. 1272/2008 [CLP] which meets New Zealand jurisdiction criteria as per EPA Hazardous Substances (Safety Data Sheets) Notice 2017 Part B Clause 9.
EPA Approval Code: **Fertilisers (Subsidiary Hazard) Group Standard 2020 – HSR002571**
GHS Classification: 6.3A, 8.3A, 9.1B
- Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) n. 2020/878
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
International Regulations of the transport of dangerous goods (ADR, RID, IMDG, ICAO/IATA).
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/669 (ATP 11 CLP)

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Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Regulation (EU) n. 2019/521 (ATP 12 CLP)

Regulation (EU) n. 2020/217 (ATP 14 CLP)

Regulation (EU) n. 2020/1182 (ATP 15 CLP)

Regulation (EU) n. 2021/643 (ATP 16 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

Restriction 3

Restrictions related to the substances contained:

Restriction 75

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)

Regulation (EC) nr 648/2004 (detergents).

Dir. 2004/42/EC (VOC directive)

Regulation (EU) 2019/1148

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

Product belongs to category: E2

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H319 Causes serious eye irritation.

Hazard class and hazard category	Code	Description
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
STOT SE 3, H335	Calculation method

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Aquatic Chronic 2, H411	Calculation method
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This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
EPA:	Environmental Protection Authority
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
HSNO:	Hazardous Substances and New Organisms.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.