



Safety Data Sheet version 4.0 dated 4/6/2021

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

1.1. Product identifier

Trade name:

LOKER

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) – HSR002571

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Warning

Hazard statements:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements:

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.

P264 Wash thoroughly with water after handling.

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.

Special Provisions:

None

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
$\geq 10\%$ - $< 12.5\%$	orthophosphoric acid 75 %	Index number: 015-011-00-6 CAS: 7664-38-2 EC: 231-633-2 REACH No.: 01-2119485924-24	 2.16/1 Met. Corr. 1 H290  3.1/4/Oral Acute Tox. 4 H302  3.2/1B Skin Corr. 1B H314  3.3/1 Eye Dam. 1 H318 Specific Concentration Limits: $C \geq 25\%$: Skin Corr. 1B H314 $10\% \leq C < 25\%$: Skin Irrit. 2 H315 $10\% \leq C < 25\%$: 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. 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 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:

Remove casualty to fresh air and keep warm and at rest.

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.

Remove persons to safety.

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.

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.

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

orthophosphoric acid 75 % - CAS: 7664-38-2

EU - TWA(8h): 1 mg/m³ - STEL(15 min): 2 mg/m³

ACGIH - TWA(8h): 1 mg/m³ - STEL: 3 mg/m³ - Notes: URT, eye and skin irr

National - TWA(8h): 1 mg/m³ - STEL(15 min): 2 mg/m³ - Notes: Austria, Belgium, Denmark, Finland, Hungary, Ireland, Italy, Latvia, Poland, Romania, Spain, Sweden, The Netherlands

National - TWA(8h): 1 mg/m³, 0.2 ppm - STEL: 2 mg/m³, 0.5 ppm - Notes: France

AGS - TWA(8h): 2 mg/m³ - STEL(15 min): 4 mg/m³ - Notes: inhalable aerosol - Germany

DFG - TWA(8h): 2 mg/m³ - STEL(15 min): 4 mg/m³ - Notes: inhalable aerosol - Germany

DNEL Exposure Limit Values

orthophosphoric acid 75 % - CAS: 7664-38-2

Worker Industry: 10.7 mg/m³ - Worker Professional: 10.7 mg/m³ - Consumer: 4.57 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 1 mg/m³ - Worker Professional: 1 mg/m³ - Consumer: 0.36 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Industry: 2 mg/m³ - Worker Professional: 2 mg/m³ mg/m³ - Exposure: Human Inhalation - Frequency: Short Term, local effects

Consumer: 0.1 mg/kg body mass/day - Exposure: Human Oral - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

N.A.

8.2. Exposure controls

Eye protection:

Eye glasses with side protection.
(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:
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:
Use according to good working practices, avoiding to disperse the product in the environment.
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):	2.2	--	--
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:	1.37 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):	4.3 mS/cm (sol.1% w/w)	--	--

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

Substances Information:

orthophosphoric acid 75 % - CAS: 7664-38-2

In contact with water, an exothermic reaction can occur.

In contact with reactive metals (mild steel, aluminum, etc.) hydrogen (explosive) can develop.

Reaction with reducing agents.

10.2. Chemical stability

Stable under normal conditions

Substances Information:

N.A.

10.3. Possibility of hazardous reactions

None

Substances Information:

orthophosphoric acid 75 % - CAS: 7664-38-2

Add the acid to the water slowly and with simultaneous stirring.

When mixing with water, do not let the mixture reach too high temperatures.

10.4. Conditions to avoid

Stable under normal conditions.

Substances Information:

orthophosphoric acid 75 % - CAS: 7664-38-2

High temperatures

10.5. Incompatible materials

None in particular.

Substances Information:

orthophosphoric acid 75 % - CAS: 7664-38-2

Ammonia

Strong bases

Metals

10.6. Hazardous decomposition products

According to the data in our possession, no one in particular to report.

Substances Information:

orthophosphoric acid 75 % - CAS: 7664-38-2

It can decompose at high temperatures releasing toxic gases.

SECTION 11: Toxicological information

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

Toxicological information of the product:

LOKER

a) acute toxicity

Not classified

Based on available data, the classification criteria are not met

ATEmix - Oral 5000 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 Irrit. 2 H319
- 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
- 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
Not classified
Based on available data, the classification criteria are not met
- 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:

orthophosphoric acid 75 % - CAS: 7664-38-2

- a) acute toxicity:
Test: LD50 - Route: Oral - Species: Rat > 300-2000 mg/kg - Source: CSR
- b) skin corrosion/irritation:
Test: Skin Corrosive - Route: Skin - Species: Rabbit - Duration: 4h - Source: ISS -
Notes: (INRS, 2011)
- c) serious eye damage/irritation:
Test: Eye Corrosive - Route: Skin - Species: Human - Source: ISS
- d) respiratory or skin sensitisation:
Route: Inhalation - Species: Human Negative - Source: ISS - Notes: Può causare la
sindrome di Brooks (INRS, 2011)
- e) germ cell mutagenicity:
Species: Human Negative - Source: ISS - Notes: In vitro: test di Ames - In vivo:
Drosophila
- f) carcinogenicity:
Species: Human Negative - Source: ISS
- g) reproductive toxicity:
Route: Inhalation - Species: Rat Negative - Source: ISS - Notes: (INRS, 2011)

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.

LOKER

Not classified for environmental hazards

Based on available data, the classification criteria are not met



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orthophosphoric acid 75 % - CAS: 7664-38-2

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Daphnia > 100 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae > 100 mg/l - Duration h: 72

Endpoint: LC50 - Species: Fish 75.1 mg/l - Duration h: 96

12.2. Persistence and degradability

None

orthophosphoric acid 75 % - CAS: 7664-38-2

Biodegradability: Degrades under anaerobic conditions.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

orthophosphoric acid 75 % - CAS: 7664-38-2

Mobility in soil: The substance reacts chemically with the alkaline components in the soil forming more or less soluble compounds (depending on the final pH).

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 NOT classified as a Dangerous Good for transport in NZ ; NZS 5433:2012

14.1. UN number or ID number

Not classified as dangerous in the meaning of transport regulations.

14.2. UN proper shipping name

N.A.

14.3. Transport hazard class(es)

N.A.

14.4. Packing group

N.A.

14.5. Environmental hazards

Marine pollutant: No

N.A.

14.6. Special precautions for user

N.A.

14.7. Maritime transport in bulk according to IMO instruments

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)



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Notice 2017 Part B Clause 9.

EPA Approval Code: Fertilisers (Subsidiary Hazard) – HSR002571
HSNO Classification: 6.3A, 6.4A

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)
Regulation (EU) n. 2018/1480 (ATP 13 CLP)
Regulation (EU) n. 2019/521 (ATP 12 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:

No restriction.

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
None

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:

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Hazard class and hazard category	Code	Description
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Met. Corr. 1	2.16/1	Substance or mixture corrosive to metals, Category 1
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

This safety data sheet has been completely updated in compliance to Regulation 2020/878. 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 Irrit. 2, H319	Calculation method

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.



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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.