

Safety Data Sheet

Zero 500D with Phosphate Buffer

Safety Data Sheet dated 18/05/2023, version 3

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

1.1. Product identifier

Mixture identification:

Trade name: Zero 500D with Phosphate Buffer

Trade code: 50001

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

Recommended use:

Laboratory chemicals.

PROFESSIONAL USE.

Uses advised against:

Do not use for purposes other than those listed.

1.3. Details of the supplier of the safety data sheet

Company:

Meccanica GM s.r.l.

Via Barca -60025 LORETO (AN) ITALY

Tel. +39 071 970727 Fax. +39 071 976604

www.prodottozero.it

E-Mail: info@meccanicagm.com

Competent person responsible for the safety data sheet:

m.clementi@meccanicagm.com

1.4. Emergency telephone number

Meccanica GM s.r.l. Tel. +39 071 970727 / 071 7500306 (ORE UFFICIO)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

The product is not classified as dangerous according to Regulation EC 1272/2008 (CLP).

Hazard pictograms:

None

Hazard statements:

None

Precautionary statements:

None

Special Provisions:

EUH210 Safety data sheet available on request.

EUH208 Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1).

May produce an allergic reaction.

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









Not applicable

3.2. Mixtures

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

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Qty	Name	Ident. Number	Classification
<0.01 %	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	Index number: 613-167-00-5 CAS: 55965-84-9	 3.1/2/Inhal Acute Tox. 2 H330  3.1/2/Dermal Acute Tox. 2 H310  3.1/3/Oral Acute Tox. 3 H301  3.2/1C Skin Corr. 1C H314  3.3/1 Eye Dam. 1 H318  3.4.2/1A Skin Sens. 1A H317  4.1/A1 Aquatic Acute 1 H400 M=10.  4.1/C1 Aquatic Chronic 1 H410 M=1. EUH071 Specific Concentration Limits: C >= 0,6%: Skin Corr. 1C H314 0,06% <= C < 0.6%: Skin Irrit. 2 H315 C >= 0,6%: Eye Dam. 1 H318 0,06% <= C < 0.6%: Eye Irrit. 2 H319 C >= 0,0015%: Skin Sens. 1A H317 Acute Toxicity Estimate: ATE - Oral 500 mg/kg bw ATE - Dermal 300 mg/kg bw ATE - Inhalation (Vapours) 3 mg/l

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Wash with plenty of water and soap.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

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

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

No data available for the mixture. See section 11 for symptoms and effects of the substances.

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:

Water spray jets, CO₂, dry chemical, foam.

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

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

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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

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Do not eat or drink while working.

7.2. Conditions for safe storage, including any incompatibilities

Keep only in the original container. Store closed containers in a well-ventilated area away from direct sunlight. Keep containers away from incompatible materials, checking section 10.

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No occupational exposure limit available

DNEL Exposure Limit Values

Not applicable

PNEC Exposure Limit Values

Not applicable

8.2. Exposure controls

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:

No special precaution must be adopted for normal use.

Protection for hands:

Not needed for normal use.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

None

Environmental exposure controls:

See section 7 and 13.

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Physical state:	Liquid	--	--
Colour:	Colourless	--	--

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Odour:	odourless	--	--
Melting point/freezing point:	Not applicable	--	--
Boiling point or initial boiling point and boiling range:	>100°C	--	--
Flammability:	Not applicable	--	--
Lower and upper explosion limit:	Not applicable	--	--
Flash point:	Not Relevant	--	--
Auto-ignition temperature:	Not applicable	--	--
Decomposition temperature:	Not Relevant	--	--
pH:	Not available	--	--
Kinematic viscosity:	Not applicable	--	--
Solubility in water:	soluble	--	--
Solubility in oil:	Not Relevant	--	--
Partition coefficient n-octanol/water (log value):	Not applicable	--	--
Vapour pressure:	Not Relevant	--	--
Density and/or relative density:	Not available	--	--
Relative vapour density:	Not Relevant	--	--
Particle characteristics:			
Particle size:	Not applicable	--	--

9.2. Other information

Properties	Value	Method:	Notes
Explosive properties:	non explosive	--	--
Oxidizing properties:	non oxidizing	--	--

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

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

Toxicological information of the product:

a) acute toxicity

Not classified

Based on available data, the classification criteria are not met

b) skin corrosion/irritation

Not classified

Based on available data, the classification criteria are not met

c) serious eye damage/irritation

Not classified

Based on available data, the classification criteria are not met

d) respiratory or skin sensitisation

Not classified

Based on available data, the classification criteria are not met

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- 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:

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) - CAS: 55965-84-9

- a) acute toxicity
 - ATE - Oral 500 mg/kg bw
 - ATE - Dermal 300 mg/kg bw
 - ATE - Inhalation (Vapours) 3 mg/l
 - Test: LD50 - Route: Oral - Species: Rat = 457 mg/kg
 - Test: LD50 - Route: Skin - Species: Rabbit = 660 mg/kg
 - Test: LC50 - Route: INHALAER - Species: Rat = 2.36 mg/l - Duration: 4h
- b) skin corrosion/irritation:
 - Test: Skin Corrosive - Species: Rabbit Positive
- c) serious eye damage/irritation:
 - Test: Eye Corrosive Positive
- d) respiratory or skin sensitisation:
 - Test: Skin Sensitization - Species: Guinea pig Positive
 - Test: Respiratory Sensitization Negative
- e) germ cell mutagenicity:
 - Test: Mutagenesis (Ames test) Negative
- f) carcinogenicity:
 - Test: Carcinogenicity Negative
- g) reproductive toxicity:
 - Test: Reproductive Toxicity Negative

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.

Not classified for environmental hazards

Based on available data, the classification criteria are not met

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) - CAS: 55965-84-9

- a) Aquatic acute toxicity:
 - Endpoint: LC50 - Species: Fish (*Oncorhynchus mykiss*) = 0.19 mg/l - Duration h: 96 - Notes: OECD 203
 - Endpoint: EC50 - Species: *Daphnia magna* = 0.16 mg/l - Duration h: 48 - Notes: OECD 202
 - Endpoint: EC50 - Species: Algae = 0.027 mg/l - Duration h: 72 - Notes: OECD 201

12.2. Persistence and degradability

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) - CAS: 55965-84-9

Biodegradability: Not readily biodegradable - Duration h: 10 days - %: 50

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12.3. Bioaccumulative potential

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) - CAS: 55965-84-9

Low bioaccumulative - Test: Log Pow 0.401

Low bioaccumulative - Test: Log Pow -0.486

12.4. Mobility in soil

reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) - CAS: 55965-84-9

Mobile - Test: Koc 28

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

Recover if possible. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

14.1. UN number or ID number

Not classified as dangerous in the meaning of transport regulations.

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

ADR-Environmental Pollutant: No

IMDG-Marine pollutant: No

14.6. Special precautions for user

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

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)

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)

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

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

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

Regulation (EU) n. 2021/849 (ATP 17 CLP)

Regulation (EU) n. 2022/692 (ATP 18 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:

No restriction.

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)

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.

Substances for which a Chemical Safety Assessment has been carried out:

None

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H330 Fatal if inhaled.

H310 Fatal in contact with skin.

H301 Toxic if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H317 May cause an allergic skin reaction.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

EUH071 Corrosive to the respiratory tract.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Hazard class and hazard category	Code	Description
Acute Tox. 2	3.1/2/Dermal	Acute toxicity (dermal), Category 2
Acute Tox. 2	3.1/2/Inhal	Acute toxicity (inhalation), Category 2
Acute Tox. 3	3.1/3/Oral	Acute toxicity (oral), Category 3
Skin Corr. 1C	3.2/1C	Skin corrosion, Category 1C
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
Skin Sens. 1A	3.4.2/1A	Skin Sensitisation, Category 1A
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1

This safety data sheet has been completely updated in compliance to Regulation 2020/878.

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECHA website: <https://echa.europa.eu/home>

IFA GESTIS website: <https://limitvalue.ifa.dguv.de>

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

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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.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
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.