

**Safety Data Sheet**

according to UK REACH Regulation

Revision date: 06.09.2023

sera CO2-Tabs plus

Product code: CO2_tabs

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

sera CO2-Tabs plus

EAN

4001942080408

UFI:

GJSE-XS9S-VENM-PJ2V

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**Water treatment chemicals: tablet to enhance the carbon dioxide (CO₂) Concentration in aquarium water.

The product is intended for consumer use.

The product is intended for professional use.

1.3. Details of the supplier of the safety data sheet**Manufacturer**Company name: sera Werke Heimtierbedarf
J. Ravnak GmbH & Co. KGStreet: Borsigstraße 49
Place: D-52525 HeinsbergPost-office box: 1466
D-52518 Heinsberg

Telephone: +49 (0)2452 91260

Telefax: +49 (0)2452 5922

e-mail: info@sera.de

Contact person: Dr. Matthias Dahm

e-mail: sds.info@sera.biz

Internet: www.sera.de

Responsible Department: Labor

SupplierCompany name: sera GmbH
Street: Borsigstr. 49

Place: D-52525 Heinsberg

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Contact person: Dr. Matthias Dahm

e-mail: sds.info@sera.biz

Internet: www.sera.de

Responsible Department: Labor

1.4. Emergency telephone number:

+49 (0)2452 91260 (Only available during office hours.)

+49 (0)2452 9126555

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****GB CLP Regulation**

Skin Irrit. 2; H315

Eye Irrit. 2; H319

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Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Signal word:

Warning

Pictograms:



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.

P280

Wear protective gloves and eye/face protection.

P302+P352

IF ON SKIN: Wash with plenty of Water.

P332+P313

If skin irritation occurs: Get medical advice/attention.

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Additional advice on labelling

The product is classified and labelled according to EC directives or corresponding national laws.

2.3. Other hazards

Being an effervescent tablet, this product will react vigorously when in contact with water

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Tablets

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
110-17-8	fumaric acid			< 15 %
	203-743-0	607-146-00-X		
	Eye Irrit. 2; H319			
124-38-9	carbon dioxide			> 8 %
	204-696-9			
	Liquefied gas; H280			
7646-93-7	potassium hydrogensulphate			< 2 %
	231-594-1	016-056-00-4		
	Skin Corr. 1B, STOT SE 3; H314 H335			

Full text of H and EUH statements: see section 16.

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Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
110-17-8	203-743-0	fumaric acid	< 15 %
		dermal: LD50 = 20000 mg/kg; oral: LD50 = 9300 mg/kg	
7646-93-7	231-594-1	potassium hydrogensulphate	< 2 %
		oral: LD50 = >2000 mg/kg	

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Brush off contaminated clothing. Wash contaminated clothing prior to re-use.

After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. When in doubt or if symptoms are observed, get medical advice.

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

No known symptoms to date.

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

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-flammable. The product itself does not burn. In case of fire may be liberated: Sulphur oxides, Carbon monoxide, Carbon dioxide (CO₂).

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.

Do not allow entering drains or surface water.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Provide adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

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For non-emergency personnel

First aider: Pay attention to self-protection! Remove persons to safety.

For emergency responders

Cover drains. Avoid dust formation.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up**For containment**

Retain contaminated washing water and dispose it.

For cleaning up

Large amounts of spillages: Use approved industrial vacuum cleaner for removal.

Small amounts of spillages: Take up dust-free and set down dust-free.

Clear contaminated areas thoroughly. Clean contaminated articles and floor according to the environmental legislation.

Other information

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Being an effervescent tablet, this product will react vigorously when in contact with water. Keep out of reach of children.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke when using this product.

Wash hands before breaks and after work.

Further information on handling

Open drum carefully as content may be under pressure. Put lids on containers immediately after use.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep only in the original container in a cool, well-ventilated place. Protect from direct sunlight. Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

Recommended storage temperature: at room temperature. Protect from moisture.

Hints on joint storage

Never allow product to get in contact with water during storage. Container can be pressurised by carbon dioxide due to reaction with humid air and/or water.

Further information on storage conditions

No special measures are necessary. The product is stable under storage at normal ambient temperatures.

Decomposes in contact with water.

7.3. Specific end use(s)

tablet to enhance the carbon dioxide (CO₂) Concentration in aquarium water.

SECTION 8: Exposure controls/personal protection

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8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
124-38-9	Carbon dioxide	5000	9150		TWA (8 h)	WEL
		15000	27400		STEL (15 min)	WEL

Additional advice on limit values

To date, no national critical limit values exist.
When using do not eat, drink, smoke, sniff.

8.2. Exposure controls

Appropriate engineering controls

No special technical protective measures are necessary.

Individual protection measures, such as personal protective equipment

Eye/face protection

Avoid contact with eyes. Wear eye/face protection. Suitable eye protection: goggles.

Hand protection

Avoid contact with skin. Wear suitable gloves.

Suitable gloves type: alkali-resistant

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: 0,2-0,3 mm

Permeation time (maximum wear duration): 2 h

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Body protection: not required.

Respiratory protection

Usually no personal respirative protection necessary. In the case of dust or aerosol formation use respirator with filter model P2 (according to DIN 3181, 1980).

Thermal hazards

Thermal decomposition can lead to the escape of irritating gases and vapours. In case of fire may be liberated: Sulphur oxides, Carbon monoxide, Carbon dioxide (CO₂).

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid
Colour:	colourless
Odour:	odourless
Odour threshold:	not applicable
Melting point/freezing point:	> 200 °C
Boiling point or initial boiling point and boiling range:	> 200 °C
Flammability:	Non-flammable.
Lower explosion limits:	not determined
Upper explosion limits:	not determined

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Flash point:	> 100 °C
Auto-ignition temperature:	Non-flammable.
Decomposition temperature:	not determined
pH-Value (at 20 °C):	4,91
Viscosity / kinematic:	not applicable
Water solubility:	completely miscible
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not applicable
Density:	not determined
Bulk density:	not applicable
Relative vapour density:	not applicable

9.2. Other information**Information with regard to physical hazard classes****Explosive properties**

Being an effervescent tablet, this product will react vigorously when in contact with water. Container can be pressurised by carbon dioxide due to reaction with humid air and/or water.

Sustaining combustion:

Not sustaining combustion

Self-ignition temperature

Solid:

No self-ignition up to the melting point.

Gas:

not applicable

Oxidizing properties

Not oxidising.

Other safety characteristics

Evaporation rate:	not applicable
Solvent separation test:	No data available
Solvent content:	0 %
Solid content:	100 %
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not applicable
Viscosity / dynamic:	not applicable
Flow time:	not applicable

Further Information

Decomposes in contact with water.

SECTION 10: Stability and reactivity**10.1. Reactivity**

Being an effervescent tablet, this product will react vigorously when in contact with water

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures. Moisture-sensitive.

10.3. Possibility of hazardous reactions

Container can be pressurised by carbon dioxide due to reaction with humid air and/or water.

10.4. Conditions to avoid

Protect from direct sunlight. Protect from moisture.

10.5. Incompatible materials

Air, humid; Water

10.6. Hazardous decomposition products

Sulphur oxides, Carbon monoxide, Carbon dioxide (CO₂).

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Thermal decomposition can lead to the escape of irritating gases and vapours.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Toxicokinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.

Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
110-17-8	fumaric acid				
	oral	LD50 mg/kg 9300	Rat	GESTIS	
	dermal	LD50 mg/kg 20000	Rabbit		
7646-93-7	potassium hydrogensulphate				
	oral	LD50 mg/kg >2000	Rat		OECD 423

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on likely routes of exposure

Ingestion, Inhalation of dust/particles, Skin contact, Eye contact

Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

Practical experience

There are no data available on the preparation/mixture itself.

11.2. Information on other hazards

Endocrine disrupting properties

There are no data available on the preparation/mixture itself.

Other information

There are no data available on the preparation/mixture itself.

Further information

Handle in accordance with good industrial hygiene and safety practice.

Health injuries are not known or expected under normal use.

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SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the preparation/mixture itself. No special environmental measures are necessary. Ecological injuries are not known or expected under normal use.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
110-17-8	fumaric acid					
	Acute fish toxicity	LC50 mg/l	>100	96 h	Danio rerio (zebrafish)	
	Acute algae toxicity	ErC50 mg/l	>100		Pseudokirchneriella subcapitata	
	Acute crustacea toxicity	EC50 mg/l	>100	48 h	Daphnia magna (Big water flea) Pseudokirchneriella subcapitata	
7646-93-7	potassium hydrogensulphate					
	Acute crustacea toxicity	EC50 mg/l	>1000	48 h	Daphnia magna (Big water flea)	

12.2. Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances. The organic part of the product is biodegradable.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
110-17-8	fumaric acid	0,46
124-38-9	carbon dioxide	0,83

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Dispose of waste according to applicable legislation.

List of Wastes Code - residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

List of Wastes Code - used product

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160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled. Dispose of waste according to applicable legislation.

SECTION 14: Transport information

Land transport (ADR/RID)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No information available.

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 75

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC

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National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 8,9,10,16.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Key literature references and sources for data

Safety Data Sheet, ECHA

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method

Relevant H and EUH statements (number and full text)

H280 Contains gas under pressure; may explode if heated.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Further Information

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP].
The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)