

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

1.1. Product identifier

Product form	: Mixture
Trade name	: Muller-Kauffmann Tetrathionate-Novobiocin (MKTTn) Broth
Product code	: NCM0126
Type of product	: Food Safety -- [Food Safety]
Part Number(s)	: 700004511 NCM0126A 700004512 NCM0126B 700004513 NCM0126C 700004514 NCM0126D NCM0126

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

1.2.1. Relevant identified uses

Use of the substance/mixture	: Laboratory chemicals Scientific research and development
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1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

Neogen Corporation
620 Leshar Place
48912 Lansing – Michigan
United States of America
T 800.234.5333
sds@neogen.com - <https://www.neogen.com/>

1.4. Emergency telephone number

Emergency number	: 24 hours: Medical: 1-800-498-5743 (U.S. and Canada) or 1-651-523-0318 (international) Spill/CHEMTREC: 1-800-424-9300 (U.S. and Canada) or 1-703-527-3887 (international)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to GB CLP (SI 2019:720 as amended)

Acute toxicity (inhalation:dust,mist) Category 4	H332
Full text of H- and EUH-statements: see section 16	

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to GB CLP (SI 2019:720 as amended)

Hazard pictograms (GHS UK)



GHS07

Signal word (GHS UK)	: Warning
Contains	: Calcium carbonate; Sodium thiosulfate, anhydrous
Hazard statements (GHS UK)	: H332 - Harmful if inhaled.

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Precautionary statements (GHS UK) : P261 - Avoid breathing dust, fume, gas, mist, vapours or spray.
P271 - Use only outdoors or in a well-ventilated area.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 - Call a POISON CENTRE or doctor if you feel unwell.

2.3. Other hazards

Results of PBT and vPvB assessment

Component	
Substance(s) not meeting the PBT criteria of UK REACH regulation, in accordance with Annex XIII	Calcium carbonate (471-34-1), Sodium thiosulfate, anhydrous (7772-98-7), Brilliant green (633-03-4)
Substance(s) not meeting the vPvB criteria of UK REACH regulation, in accordance with Annex XIII	Calcium carbonate (471-34-1), Sodium thiosulfate, anhydrous (7772-98-7), Brilliant green (633-03-4)

Results of Endocrine Disruptor assessment

Component	
Substance(s) not considered as endocrine disrupting. They are not included in the list established in accordance with Article 59(1) of UK REACH for having endocrine disrupting properties, nor identified as having endocrine disrupting properties in accordance with the criteria set out in GB BPR and GB PPP	Calcium carbonate(471-34-1), Sodium thiosulfate, anhydrous(7772-98-7), Brilliant green(633-03-4)

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to GB CLP (SI 2019:720 as amended)
Calcium carbonate substance with workplace exposure limit(s)	CAS-No.: 471-34-1 EC-No.: 207-439-9	25 – 50	Acute Tox. 4 (Inhalation:dust,mist), H332 (ATE=1.5 mg/l/4h)
Sodium thiosulfate, anhydrous	CAS-No.: 7772-98-7 EC-No.: 231-867-5	25 – 50	Acute Tox. 4 (Inhalation:dust,mist), H332 (ATE=1.5 mg/l/4h)
Brilliant green	CAS-No.: 633-03-4 EC-No.: 211-190-1	< 0.1	Acute Tox. 4 (Oral), H302 (ATE=674 mg/kg bodyweight) Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)

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

SECTION 4: First aid measures

4.1. Description of first aid measures

No additional information available

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

No additional information available

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

No additional information available

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SECTION 5: Firefighting measures

5.1. Extinguishing media

No additional information available

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

No additional information available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

No additional information available

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

No additional information available

7.2. Conditions for safe storage, including any incompatibilities

Storage temperature : 2 – 30 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Calcium carbonate (471-34-1)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	10 mg/m ³ (Inhalable dust) 4 mg/m ³ (Respirable dust)

8.1.2. Recommended monitoring procedures

No additional information available

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8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

No additional information available

8.2.2.2. Skin protection

No additional information available

8.2.2.3. Respiratory protection

No additional information available

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Colour	: Beige.
Odour	: Characteristic.
Odour threshold	: Not available
pH	: 7.8 – 8.2
pH solution	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flash point	: Not applicable
Flammability	: Not available
Explosive limits	: Not applicable
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Relative vapour density at 20°C	: Not applicable
Relative density	: Not available
Density	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
Viscosity, kinematic	: Not applicable
Explosive properties	: Not available

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Inhalation:dust,mist: Harmful if inhaled.

Muller-Kauffmann Tetrathionate-Novobiocin (MKTTn) Broth	
ATE UK (dust, mist)	1.94 mg/l/4h
Calcium carbonate (471-34-1)	
LD50 oral rat	> 2000 mg/kg (OECD 420: Acute Oral toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 3 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 15 day(s))
LC50 Inhalation - Rat (Dust/Mist)	> 3 mg/l Source: ECHA
Sodium thiosulfate, anhydrous (7772-98-7)	
LD50 oral rat	> 5000 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Read-across, Oral, 14 day(s))
LD50 dermal rabbit	> 2000 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 2.6 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Read-across, Inhalation (aerosol), 14 day(s))
Brilliant green (633-03-4)	
LD50 oral rat	674 mg/kg bodyweight (Equivalent or similar to OECD 423, Rat, Male / female, Read-across, Oral, 14 day(s))
LD50 dermal rat	> 2000 mg/kg bodyweight (Rat, Read-across, Dermal, 14 day(s))
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 7.8 – 8.2

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Calcium carbonate (471-34-1)	
pH	8 – 9 (10 %, 20 °C)
Sodium thiosulfate, anhydrous (7772-98-7)	
pH	7.8 (10 %)
Brilliant green (633-03-4)	
pH	2 – 3 (1 %)

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 7.8 – 8.2

Calcium carbonate (471-34-1)	
pH	8 – 9 (10 %, 20 °C)
Sodium thiosulfate, anhydrous (7772-98-7)	
pH	7.8 (10 %)
Brilliant green (633-03-4)	
pH	2 – 3 (1 %)

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Calcium carbonate (471-34-1)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	≥ 0.212 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

Calcium carbonate (471-34-1)	
Viscosity, kinematic	Not applicable (solid)
Brilliant green (633-03-4)	
Viscosity, kinematic	Not applicable (solid)

Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic) : Not classified (Based on available data, the classification criteria are not met)

Calcium carbonate (471-34-1)	
LC50 - Fish [1]	> 100 % (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, Nominal concentration)

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Calcium carbonate (471-34-1)	
EC50 - Crustacea [1]	> 100 % (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 72h - Algae [1]	> 14 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [1]	22000 mg/l Source: Ecological Structure Activity Relationships
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

Sodium thiosulfate, anhydrous (7772-98-7)	
LC50 - Fish [1]	510 mg/l (96 h, Lepomis macrochirus, Static system, Fresh water, Read-across, Lethal)
EC50 - Crustacea [1]	230 mg/l (48 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect)
EC50 72h - Algae [1]	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Read-across, Growth rate)
NOEC (chronic)	> 10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	≥ 316 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '34 d'

Brilliant green (633-03-4)	
LC50 - Fish [1]	0.0305 mg/l (96 h, Lepomis macrochirus, Fresh water)
EC50 - Crustacea [1]	0.079 mg/l (96 h, Invertebrata, Fresh water)
ErC50 algae	1.7913 mg/l (7 day(s), Lemna gibba, Nominal concentration)

12.2. Persistence and degradability

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Persistence and degradability	Not rapidly degradable
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Calcium carbonate (471-34-1)

Persistence and degradability	Biodegradability in soil: not applicable, Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

Sodium thiosulfate, anhydrous (7772-98-7)

Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Brilliant green (633-03-4)

Persistence and degradability	Not readily biodegradable in water.
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12.3. Bioaccumulative potential

Calcium carbonate (471-34-1)

Bioaccumulative potential	Not bioaccumulative.
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Sodium thiosulfate, anhydrous (7772-98-7)

Partition coefficient n-octanol/water (Log Pow)	-4.35 Source: International Chemical Safety Cards
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Sodium thiosulfate, anhydrous (7772-98-7)	
Bioaccumulative potential	No bioaccumulation data available.
Brilliant green (633-03-4)	
Partition coefficient n-octanol/water (Log Pow)	0.7647 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

Calcium carbonate (471-34-1)	
Mobility in soil	4.971 Source: Quantitative Structure Activity Relation
Surface tension	No data available (test not performed)
Ecology - soil	Low potential for adsorption in soil.
Brilliant green (633-03-4)	
Surface tension	No data available in the literature
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Results of PBT and vPvB assessment

Component	
Calcium carbonate (471-34-1)	This substance does not meet the PBT criteria of UK REACH regulation, annex XIII This substance does not meet the vPvB criteria of UK REACH regulation, annex XIII
Sodium thiosulfate, anhydrous (7772-98-7)	This substance does not meet the PBT criteria of UK REACH regulation, annex XIII This substance does not meet the vPvB criteria of UK REACH regulation, annex XIII
Brilliant green (633-03-4)	This substance does not meet the PBT criteria of UK REACH regulation, annex XIII This substance does not meet the vPvB criteria of UK REACH regulation, annex XIII

12.6. Other adverse effects

Ozone : Not classified (Based on available data, the classification criteria are not met)

SECTION 13: Disposal considerations

13.1. Waste treatment methods

HP Code : HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable

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ADR	IMDG	IATA	ADN	RID
Transport document description				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not applicable

Rail transport

Not applicable

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. National regulations

UK REACH Annex XVII (Restriction List)

This product contains no substance(s) listed on UK REACH Annex XVII (Restriction List) equal to or above the level of SDS disclosure

UK REACH Annex XIV (Authorisation List)

This product contains no substance(s) listed on UK REACH Annex XIV (Authorisation List) equal to or above the 0.1% level of disclosure

UK REACH Candidate List (SVHC)

This product contains no substance(s) listed on the UK REACH Candidate List (SVHC) above the 0.1% level of disclosure

GB PIC Regulation (Prior Informed Consent)

This product contains no substance(s) listed on the GB PIC List equal to or above the level of SDS disclosure

POP Regulation (Persistent Organic Pollutants)

This product contains no substance(s) listed on the GB POP List equal to or above the level of SDS disclosure

Ozone Regulation (S.I. No. 168 of 2015)

This product contains no substance(s) listed on the GB Ozone Depletion List equal to or above the level of SDS disclosure

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Control of Poisons and Explosives Precursors Act

This product contains no substance(s) listed as a reportable poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This product contains no substance(s) listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This product contains no substance(s) listed as a reportable explosive precursor on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This substance is not listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations

Drug Precursors Regulation (EC 273/2004)

This product contains no substance(s) listed on the GB Drug Precursors List equal to or above the level of SDS disclosure

15.1.2. Other Information

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Sens. 1	Skin sensitisation, Category 1
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Safety Data Sheet (SDS), UK

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.