

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

1.1. Product identifier

Product form : Mixture
Trade name : Lowenstein-Jensen Medium
Product code : NCM0276
Type of product : Food Safety -- [Food Safety]
Part Number(s) : 700003632|NCM0276A|700003633|NCM0276B|NCM0276

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

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 Leshler 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)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Serious eye damage/eye irritation, Category 2 H319
Hazardous to the aquatic environment – Chronic Hazard, Category 3 H412
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
Hazard statements (GHS UK) : H319 - Causes serious eye irritation.
H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (GHS UK) : P264 - Wash hands, forearms and face thoroughly after handling.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection and

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hearing 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.

P337+P313 - If eye irritation persists: Get medical advice or attention.

P501 - Dispose of contents and container to a hazardous or special waste collection point, in accordance with local, regional, national and international regulations.

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	Starch, soluble (potato) (9005-25-8), Malachite green oxalate (2437-29-8), Ferric ammonium citrate (1185-57-5), Copper sulfate (7758-98-7)
Substance(s) not meeting the vPvB criteria of UK REACH regulation, in accordance with Annex XIII	Starch, soluble (potato) (9005-25-8), Malachite green oxalate (2437-29-8), Ferric ammonium citrate (1185-57-5), Copper sulfate (7758-98-7)

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	Starch, soluble (potato)(9005-25-8), Malachite green oxalate(2437-29-8), Ferric ammonium citrate(1185-57-5), Copper sulfate(7758-98-7)

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)
Starch, soluble (potato) substance with workplace exposure limit(s)	CAS-No.: 9005-25-8 EC-No.: 232-679-6	≥ 75	Not classified
Malachite green oxalate	CAS-No.: 2437-29-8 EC-No.: 219-441-7	1 – 5	Acute Tox. 3 (Oral), H301 (ATE=275 mg/kg bodyweight) Eye Dam. 1, H318 Repr. 2, H361d Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Ferric ammonium citrate substance with workplace exposure limit(s)	CAS-No.: 1185-57-5 EC-No.: 214-686-6	0.1 – 0.5	Not classified
Copper sulfate substance with workplace exposure limit(s)	CAS-No.: 7758-98-7 EC-No.: 231-847-6	< 0.1	Acute Tox. 3 (Oral), H301 (ATE=300 mg/kg bodyweight) Acute Tox. 4 (Inhalation:dust,mist), H332 (ATE=3 mg/l/4h) Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT RE 2, H373 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410

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

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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

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

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Starch, soluble (potato) (9005-25-8)	
United Kingdom - Occupational Exposure Limits	
Local name	Starch
WEL TWA (OEL TWA)	4 mg/m ³ respirable 10 mg/m ³ total inhalable
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Ferric ammonium citrate (1185-57-5)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	1 mg/m ³
WEL STEL (OEL STEL)	2 mg/m ³
Copper sulfate (7758-98-7)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	1 mg/m ³
WEL STEL (OEL STEL)	2 mg/m ³

8.1.2. Recommended monitoring procedures

No additional information available

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

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Colour	: Light green.
Odour	: Characteristic.
Odour threshold	: Not available
pH	: 5.3 – 5.7
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

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)

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Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

Starch, soluble (potato) (9005-25-8)	
LD50 oral rat	> 2000 mg/kg (Rat, Literature study, Oral)

Malachite green oxalate (2437-29-8)	
LD50 oral rat	275 mg/kg (Rat, Oral)
LD50 dermal rat	> 2000 mg/kg

Ferric ammonium citrate (1185-57-5)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: other:
LD50 dermal rabbit	> 7940 mg/kg Source: ECHA

Copper sulfate (7758-98-7)	
LD50 oral rat	482 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 oral	300 mg/kg
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 (Dust/Mist)	1 – 5 mg/l Source: OSHRI GLP toxicity test

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 5.3 – 5.7

Starch, soluble (potato) (9005-25-8)	
pH	6 – 7.5 (2 %)

Malachite green oxalate (2437-29-8)	
pH	2.4 (1 %)

Ferric ammonium citrate (1185-57-5)	
pH	6 – 8 Source: ECHA

Copper sulfate (7758-98-7)	
pH	4 (3.2 %)

Serious eye damage/irritation : Causes serious eye irritation.
pH: 5.3 – 5.7

Starch, soluble (potato) (9005-25-8)	
pH	6 – 7.5 (2 %)

Malachite green oxalate (2437-29-8)	
pH	2.4 (1 %)

Ferric ammonium citrate (1185-57-5)	
pH	6 – 8 Source: ECHA

Copper sulfate (7758-98-7)	
pH	4 (3.2 %)

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)

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Ferric ammonium citrate (1185-57-5)	
NOAEL (animal/male, F0/P)	595.9 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: other:
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)
Copper sulfate (7758-98-7)	
NOAEL (oral, rat, 90 days)	16.3 – 17.3 mg/kg bw/day
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Starch, soluble (potato) (9005-25-8)	
Viscosity, kinematic	Not applicable (solid)
Copper sulfate (7758-98-7)	
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) : Harmful to aquatic life with long lasting effects.

Malachite green oxalate (2437-29-8)	
LC50 - Fish [1]	0.12 mg/l (96 h, Pimephales promelas)
EC50 - Crustacea [1]	0.29 mg/l (48 h, Daphnia magna)
ErC50 algae	1.08 mg/l
Ferric ammonium citrate (1185-57-5)	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Static system, Fresh water, Experimental value)
LC50 - Fish [2]	> 100 mg/l Test organisms (species): other:
EC50 - Crustacea [1]	275 mg/l (48 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): other:
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Static system, Fresh water, Experimental value)
Copper sulfate (7758-98-7)	
LC50 - Fish [1]	38.4 µg/l (96 h, Pimephales promelas, Flow-through system, Fresh water, Read-across)
EC50 - Crustacea [1]	7 – 1213 µg/l
EC50 72h - Algae [1]	0.01 – 0.28 mg/l (Selenastrum capricornutum, Growth)
EC50 72h - Algae [2]	18 – 46 µg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)
NOEC chronic fish	2.2 – 45 µg/l
NOEC chronic crustacea	4 – 31 µg/l

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Copper sulfate (7758-98-7)	
NOEC chronic algae	0.013 mg/l

12.2. Persistence and degradability	
Lowenstein-Jensen Medium	
Persistence and degradability	Not rapidly degradable
Starch, soluble (potato) (9005-25-8)	
Persistence and degradability	Readily biodegradable in water.
ThOD	1.18 g O ₂ /g substance
Malachite green oxalate (2437-29-8)	
Persistence and degradability	Not readily biodegradable in water.
Ferric ammonium citrate (1185-57-5)	
Persistence and degradability	Readily biodegradable in water.
Copper sulfate (7758-98-7)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential	
Starch, soluble (potato) (9005-25-8)	
Bioaccumulative potential	No bioaccumulation data available.
Malachite green oxalate (2437-29-8)	
BCF - Fish [1]	0.15 mg/l (24 h, Salmo gairdneri, Residues)
Partition coefficient n-octanol/water (Log Pow)	1.15 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Ferric ammonium citrate (1185-57-5)	
Partition coefficient n-octanol/water (Log Pow)	-0.737 (Calculated, 25 °C)
Bioaccumulative potential	Not bioaccumulative.
Copper sulfate (7758-98-7)	
Partition coefficient n-octanol/water (Log Pow)	-0.17 Source: EPISUITE
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil	
Starch, soluble (potato) (9005-25-8)	
Ecology - soil	No (test)data on mobility of the substance available.
Ferric ammonium citrate (1185-57-5)	
Ecology - soil	No (test)data on mobility of the substance available.

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Copper sulfate (7758-98-7)	
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	
Starch, soluble (potato) (9005-25-8)	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
Malachite green oxalate (2437-29-8)	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
Ferric ammonium citrate (1185-57-5)	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
Copper sulfate (7758-98-7)	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

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 : HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

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
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				

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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

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

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SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) 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
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
H301	Toxic if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful 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.