MRS Agar

Safety Data Sheet

according to the Hazardous Products Regulation (WHMIS 2015)
Issue date: 05-20-2025 Revision date: 08-11-2025 Supersedes: 05-20-2025 Version: 2.0

SECTION 1 Identification

1.1. GHS Product identifier

Product form : Mixture
Trade name : MRS Agar
Type of product : Food Safety -- [Food Safety]
Product code : NCM0190

1.2. Other means of identification

Part Number(s) : NCM0190|700004601|700004602

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : Laboratory chemicals,Scientific research and development
Recommended use : Scientific research and development,Laboratory chemicals

1.4. Supplier's details

Neogen Corporation
620 Lesher Place
Lansing, Michigan 48912
United States of America
T 800.234.5333
sds@neogen.com - https://www.neogen.com/

1.5. Emergency phone 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 Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA)

Combustible dust, Category 1 — May form combustible dust concentrations in air.
Full text of H statements : see section 16

2.2. GHS label elements, including precautionary statements

GHS CA labeling

Signal word (GHS CA) : Warning

Hazard statements (GHS CA) : H Comb Dust - May form combustible dust concentrations in air

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
Ammonium citrate tribasic	Triammonium citrate	CAS-No.: 3458-72-8	≥ 1 – < 5	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
Citric acid	CITRIC ACID MONOHYDRATE 1,2,3-propanetricarboxylic acid, 2-hydroxy-, monohydrate / 2-hydroxy-1,2,3-propanetricarboxylic acid, monohydrate / 2-hydroxypropane-1,2,3-tricarboxylic acid, monohydrate / beta-hydroxytricarballylic acid, monohydrate / beta-hydroxytricarboxylic acid, monohydrate / citric acid, monohydrate / E 330 / hydroxytricarballylic acid, monohydrate / Soerensen's buffer substance	CAS-No.: 5949-29-1	≥ 1 – < 5	Eye Irrit. 2A, H319 STOT SE 3, H335

Sorbitan, mono-(9Z)-9-octadecenoate, poly(oxy-1,2-ethanediyl) derivs.	(Z)-Mono-9-octadecenoate sorbitan poly(oxy-1,2-ethanediyl) derivs. ; Polyoxyethylene sorbitan monooleate alkamuls PSMO 20 / armotan PMO-20 / atlox 1087 / atlox 8916TF / capmul POE-O / cemerol T 80 / cemesol TW 1020 / crill 10 / crill 11 / crill S 10 / crillet 4 / crillet 41 / disponil SMO 120 / drewmulse POE-SMO / durfax 80 / emsorb 6900 / emulgin SMO 20 / emulson 100M / ethoxylated sorbitan monooleate / ethylene oxide-sorbitan mono-oleate polymer / flo Mo SMO 20 / glycols, polyethylene, ether with sorbitan monooleate / glycosperse O 5 / glycosperse O-20 / glycosperse O-20 VEG / glycosperse O-20X / hexaethylene glycol sorbitan monoleate / hodag SVO 9 / ionet T80 / ionet T80C / liposorb O-20 / liposord L-20 / MO 55F / monitan / montanox 80 / nikkol TO / nikkol TO 10 / nikkol TO 106 / nikkol TO 10M / nissan	CAS-No.: 9005-65-6	≥ 1 – < 5	Aquatic Acute 3, H402 Aquatic Chronic 3, H412

	nonion OT 221 / nonion OT 221 / olothorb / polyethylene glycol sorbitan ether monooleate / polyethylene glycol sorbitan monooleate / polyethylene oxide sorbitan mono-oleate / polyoxyethylated sorbitan monooleate / polyoxyethylene (20) sorbitan monooleate / polyoxyethylene monosorbitan monooleate / polyoxyethylene sorbitan oleate / polyoxyethylene sorbitanmonooolea te / polyoxyethylene(2 0)sorbitan monooleate / protasorb O-20 / PST40200 / rheodol super TW-O120 / rheodol TW-L 80 / rheodol TW-O 106 / rheodol TW-O 120 / romulgin O / setrolene O / sorbimacrogol oleate / sorbimacrogol oleate 300 / sorbital 0 20 / sorbitan mono-9-octadecenoate poly(oxy-1,2-ethanediyl) derives / sorbitan monoleate / sorbitan monooleate ethylene oxide adduct / sorbitan monooleate polyethylene glycol ether / sorbitan mono-			

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
	oleate polyoxyethylene / sorbitan monooleate polyoxyethylene derivatives / sorbitan monooleate polyoxyethylene ether / Sorbitan monooleate, ethoxylated / sorbitan oleate-ethylene oxide adduct / sorbitan, mono-9-octadecenoate, poly(oxy-1,2-ethanediyl) der / sorbitan, monooleate, polyoxyethylene derivs. / sorbon T 80 / sorethytan (20) mono-oleate / sorgen TW 80 / sorlate / SVO 9 / T-164 / TO 10 / TO 10M / tris(polyoxyethylene)sorbitan monooleate / TWEEN 18:1c / TWEEN 81 / TWEEN 81 (polysorbate 81) / witconol 2722			

Full text of hazard classes and H-statements : see section 16

SECTION 4 First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.
First-aid measures general : If you feel unwell, seek medical advice.
Personal protection for first-aid responders. : First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : None under normal conditions. Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.

Symptoms/effects after skin contact : None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.

Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.

Symptoms/effects after ingestion : None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5 Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : May form combustible dust concentrations in air.

Explosion hazard : No direct explosion hazard.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective actions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Using a clean shovel, put the material in a dry container and cover without compressing it.

Methods for cleaning up : Mechanically recover the product.

Other information : Dispose of materials or solid residues at an authorized site.

For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid dust formation.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Keep in a cool, well-ventilated place away from heat.
Storage conditions	:	Keep cool. Protect from sunlight.
Storage temperature	:	2 – 30 °C
Packaging materials	:	Store always product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls	:	Ensure good ventilation of the work station.
Environmental exposure controls	:	Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment:
Wear recommended personal protective equipment.

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):

SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Powder.
Color	:	Beige
Odor	:	Characteristic
Odor threshold	:	No data available
pH	:	5.6 – 5.8
Relative evaporation rate (butyl acetate=1)	:	No data available
Relative evaporation rate (ether=1)	:	No data available

Melting point	:	No data available
Freezing point	:	Not applicable
Boiling point	:	No data available
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Non flammable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	No data available
Solubility	:	Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Viscosity, kinematic	:	Not applicable
Explosion limits	:	Not applicable
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

Reactivity	:	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reactions known under normal conditions of use.
Conditions to avoid	:	Avoid dust formation. Heat. No flames, no sparks. Eliminate all sources of ignition.
Incompatible materials	:	No additional information available
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hardening time:	:	No additional information available

SECTION 11 Toxicological information

11.1. Likely routes of exposure

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

MRS Agar	
Unknown acute toxicity (GHS CA)	4.39% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 62.86% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 62.86% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

Ammonium citrate tribasic (3458-72-8)	
LD50 oral rat	2000 – 5000 mg/kg
ATE CA (oral)	2000 mg/kg body weight

Citric acid (5949-29-1)	
LD50 oral rat	5400 mg/kg Mouse, male and female; Test substance: Citric acid (OECD Test Guideline 401)
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Anhydrous form, Dermal, 14 day(s))
ATE CA (oral)	5400 mg/kg body weight

Skin corrosion/irritation : Not classified.
pH: 5.6 – 5.8

Citric acid (5949-29-1)	
pH	1.8 (5 %, 25 °C)

Sorbitan, mono-(9Z)-9-octadecenoate, poly(oxy-1,2-ethanediyl) derivs. (9005-65-6)	
pH	5 – 7 (5 %)

Serious eye damage/irritation : Not classified
pH: 5.6 – 5.8

Citric acid (5949-29-1)	
pH	1.8 (5 %, 25 °C)

Sorbitan, mono-(9Z)-9-octadecenoate, poly(oxy-1,2-ethanediyl) derivs. (9005-65-6)	
pH	5 – 7 (5 %)

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified

Ammonium citrate tribasic (3458-72-8)	
STOT-single exposure	May cause respiratory irritation.

Citric acid (5949-29-1)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

MRS Agar	
Viscosity, kinematic	Not applicable

Citric acid (5949-29-1)	
Viscosity, kinematic	Not applicable (solid)

Sorbitan, mono-(9Z)-9-octadecenoate, poly(oxy-1,2-ethanediyl) derivs. (9005-65-6)	
Viscosity, kinematic	462.963 – 46648.148 mm²/s

Symptoms/effects after inhalation : None under normal conditions. Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure.
Symptoms/effects after skin contact : None under normal conditions. Dust may cause irritation in skin folds or by contact in combination with tight clothing.
Symptoms/effects after eye contact : None under normal conditions. Dust from this product may cause eye irritation.
Symptoms/effects after ingestion : None under normal conditions.

SECTION 12 Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short–term (acute) : Not classified.
Hazardous to the aquatic environment, long–term (chronic) : Not classified.

Ammonium citrate tribasic (3458-72-8)	
LC50 - Fish [1]	94000 mg/l Source: EPISUITE
EC50 96h - Algae [1]	7059.161 mg/l Source: EPISUITE

Citric acid (5949-29-1)	
LC50 - Fish [1]	440 – 760 mg/l (Leuciscus idus melanotus, mortality; 48 h) (static test; OECD Test Guideline 203)
EC50 - Crustacea [1]	1535 mg/l (24 h, Daphnia magna, Static system, Fresh water, Experimental value, Anhydrous form)
EC50 96h - Algae [1]	1690000 mg/l Source: Ecological Structure Activity Relationships

Sorbitan, mono-(9Z)-9-octadecenoate, poly(oxy-1,2-ethanediyl) derivs. (9005-65-6)	
LC50 - Fish [1]	817.89 mg/l Source: ECOSAR
EC50 96h - Algae [1]	62.072 mg/l Source: ECOSAR

12.2. Persistence and degradability

MRS Agar	
Persistence and degradability	Not rapidly degradable

Ammonium citrate tribasic (3458-72-8)	
Persistence and degradability	Not rapidly degradable

Citric acid (5949-29-1)	
Persistence and degradability	Biodegradable in the soil, Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.481 g O_2/g substance (Anhydrous form)
Biodegradation	97 % Related to: CO2 formation (% of the theoretical value).; Exposure Time: 28 d)(OECD Test Guideline 301B)

Sorbitan, mono-(9Z)-9-octadecenoate, poly(oxy-1,2-ethanediyl) derivs. (9005-65-6)	
Persistence and degradability	Biodegradability in water: no data available.

12.3. Bioaccumulative potential

Ammonium citrate tribasic (3458-72-8)	
Partition coefficient n-octanol/water (Log Pow)	-1.43 Source: EPISUITE

Citric acid (5949-29-1)	
Bioaccumulative potential	Not bioaccumulative.
Partition coefficient n-octanol/water (Log Pow)	-1.6 (Anhydrous form, Experimental value)

Sorbitan, mono-(9Z)-9-octadecenoate, poly(oxy-1,2-ethanediyl) derivs. (9005-65-6)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

Citric acid (5949-29-1)	
Surface tension	No data available in the literature
Ecology - soil	Highly mobile in soil.

Citric acid (5949-29-1)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1 (log Koc, SRC PCKOCWIN v2.0, Calculated value)

12.5. Other adverse effects

Ozone : Not classified

Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Comply with applicable regulations for solid waste disposal. Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.

SECTION 14 Transport information

In accordance with TDG / DOT / IMDG / IATA

TDG	DOT	IMDG	IATA
14.1. UN Number			
Not regulated for transport			
14.2. UN Proper Shipping Name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group, if applicable			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Special precautions for user

TDG
Not regulated

DOT
Not regulated

IMDG
Not regulated

IATA
Not regulated

14.7. Transport in bulk according to Annex II of MARPOL 73/78[9] and the IBC Code[10]

Not applicable

SECTION 15 Regulatory information

Ammonium citrate tribasic (3458-72-8)	
Listed on the Canadian DSL (Domestic Substances List)	
Canada DSL & NDSL Flags	Significant New Activity (SNAc) provisions of the Act apply

Citric acid (5949-29-1)	
Listed on the Canadian DSL (Domestic Substances List)	
Canada DSL & NDSL Flags	Significant New Activity (SNAc) provisions of the Act apply

Sorbitan, mono-(9Z)-9-octadecenoate, poly(oxy-1,2-ethanediyl) derivs. (9005-65-6)
Listed on the Canadian DSL (Domestic Substances List)

Ammonium citrate tribasic (3458-72-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

Citric acid (5949-29-1)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Sorbitan, mono-(9Z)-9-octadecenoate, poly(oxy-1,2-ethanediyl) derivs. (9005-65-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active **Listed on INSQ (Mexican National Inventory of Chemical Substances)**

SECTION 16 Other Information

Issue date : 05-20-2025
Revision date : 08-11-2025
Supersedes : 05-20-2025

Full text of hazard classes and H-statements:	
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

Safety Data Sheet (SDS), Canada

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.