

Modified agarose in 20% ethanol

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 11/10/2023 Revision date: 1/2/2024 Version: 1.1

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

1.1. Product identifier

Product form	: Article
Trade name	: Modified agarose in 20% ethanol
UFI	: Q3N3-R0SX-T00Q-00KC
Product code	: TM-1101; TM-1102; TM-1105; TM-1108; TM-1109; TM-1202; TM-1205; TM-1207; TM-1208; TM-1315; TM-1319; TM-1320; TM-1410; TM-1412; TM-1414; TM-1415; TM-1416; TM-1417; TM-1418; TM-1425; TM-1450; TM-1451; TM-1452; TM-1453; TM-1454; TM-1455; TM-1519; TM-1520; TM-1521; TM-4201; TM-4202; TM-4203; TM-4204; TM-4205; TM-4206; TM-4207; TM-4208; TM-4301; TM-4302; TM-4402; TM-4404; TM-4405; TM-4406; TM-4407; TM-4408; TM-4409; TM-4425; TM-4501; TM-4502; TM-4503; TM-8201
Type of product	: Liquid chromatography. Research and development.
Synonyms	: An aqueous suspension; Cross-linked beaded agarose resin in 20 % ethanol
Product group	: End product

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

1.2.1. Relevant identified uses

Main use category	: Professional use, Laboratory chemical
Industrial/Professional use spec	: For professional use only Industrial
Use of the substance/mixture	: Substance manufacture Laboratory chemicals
Function or use category	: Laboratory chemicals

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

emp Biotech GmbH GmbH
Robert-Rössle-Str. 10
DE 13125 Berlin
Deutschland
T +49 (0)30 94 89 22 01 (Monday-Friday, 9:00 am-5:00 pm), F +49 (0)30 94 89 32 01
info@empbiotech.com, www.empbiotech.com

1.4. Emergency telephone number

Emergency number	: Giftnotruf Berlin +49 30 30686700 (Beratung in Deutsch), 24 Stunden, 7 Tage/Woche; International: INFOTRAC +1-352-323-3500 (Phone) or in the US 800-535-5053 (toll-free), 24 hours/day, 7 days/week
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 3 H226
Full text of hazard classes, H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H226 - Flammable liquid and vapour.

Precautionary statements (CLP) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 - Keep container tightly closed.

P240 - Ground and bond container and receiving equipment.

P241 - Use explosion-proof electrical, ventilating, lighting equipment.

P242 - Use non-sparking tools.

2.3. Other hazards

Other hazards which do not result in classification : This substance / mixture does not contain any components of 0.1% or higher that are either classified as persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethanol	CAS-No.: 64-17-5 EC-No.: 200-578-6 EC Index-No.: 603-002-00-5 REACH-no: 01-2119457610-43-XXXX	20	Flam. Liq. 2, H225
AGAROSE	CAS-No.: 9012-36-6 EC-No.: 232-731-8		Not classified

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general :

Consult a doctor. Show this safety data sheet to the doctor in attendance.

First-aid measures after inhalation :

Move person to fresh air and ensure comfortable breathing.

First-aid measures after skin contact :

Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower.

First-aid measures after eye contact :

Rinse cautiously with water for several minutes. Remove contact lenses, if possible. Continue rinsing.

First-aid measures after ingestion :

Make victim drink water (two glasses at most). Consult doctor if feeling unwell.

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

Symptoms/effects : The most important known symptoms and effects are described on the label (see 2.2) and / or in section 11.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Carbon dioxide (CO₂). extinguishing powder.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Mixture with combustible ingredients.
Explosion hazard : Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air at elevated temperatures.
Development of hazardous combustion gases or vapours possible in the event of fire.
Hazardous decomposition products in case of fire : Hazardous decomposition products formed under fire conditions. - Carbon oxides.

5.3. Advice for firefighters

Protection during firefighting : Wear self-contained breathing apparatus for firefighting if necessary.
Other information : Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : For personal protection see section 8.
Emergency procedures : Do not breathe vapours, spray. Ensure adequate ventilation, observe emergency procedures, consult an expert. Keep away from heat and sources of ignition.
. Evacuate area.

6.1.2. For emergency responders

Protective equipment : Wear recommended personal protective equipment.

6.2. Environmental precautions

Do not let product enter drains. Be careful of explosion risk.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®).
Dispose of properly. Clean up affected area.

6.4. Reference to other sections

Information on exposure controls/personal protective equipment and on Instructions for disposal can be found in sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. For precautions see section 2.2.

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Hygiene measures : Take off immediately all contaminated clothing and wash it before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed in a dry, well-ventilated place. Keep away from heat and sources of ignition. Do not freeze.
Storage temperature : 2 – 30 °C
Storage area : Storage class (TRGS 510): See section 15.1.2.

7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Ethanol (64-17-5)	
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Ethanol
AGW (OEL TWA)	960 mg/m ³
	500 ppm
Remark	DFG,Y

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

Appropriate engineering controls:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Wear closed safety glasses. EN 166

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8.2.2.2. Skin protection

Skin and body protection:

Wear protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Flame retardant antistatic protective clothing

Hand protection:

Protective gloves. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

8.2.2.3. Respiratory protection

Respiratory protection:

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or EN (EU).

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Not available
Colour	: Not available
Appearance	: Aqueous suspension.
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 38 – 43 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 0.989 g/cm ³
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

Vapour/air-mixtures are explosive at intense warming.

10.2. Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3. Possibility of hazardous reactions

Violent reactions possible with:
The generally known reaction partners of water.

10.4. Conditions to avoid

Heat.

10.5. Incompatible materials

Alkali metals. Ammonia. Oxidizing agent. Peroxides.

10.6. Hazardous decomposition products

In the event of fire: see section 5.

SECTION 11: Toxicological information

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

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

Ethanol (64-17-5)

LD50 oral rat	7060 mg/kg - Toxicology and Applied Pharmacology. Vol. 16, Pg. 718, 1970.
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Skin corrosion/irritation : Not classified

Ethanol (64-17-5)

pH	7 at 20 °C; 10 g/l
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Serious eye damage/irritation : Eyes - Rabbit
Result: Causes serious eye irritation.
(OECD Test Guideline 405)

Ethanol (64-17-5)

pH	7 at 20 °C; 10 g/l
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Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

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IARC group	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
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Ethanol (64-17-5)

IARC group	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
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Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not applicable

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11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties

: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH article 57(f) or commission delegated regulation (EU) 2017/2100 or commission regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2. Other information

Potential adverse human health effects and symptoms

: Central nervous system depression, narcosis, damage to the heart.
Heart - Irregularities - Based on Human Evidence (Ethanol)

Other information

: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Ethanol (64-17-5)

LC50 - Fish [1]	42 – 14200 mg/l - Bengtsson, B.E., L. Renberg, and M. Tarkpea 1984.
EC50 - Crustacea [1]	9950 (2 – 17500) mg/l - Barera, Y., and W.J. Adams 1983. Resolving Some Practical Questions About Daphnia Acute Toxicity Tests.
ErC50 algae	275 mg/l Static test ErC50 - Chlorella vulgaris (Fresh water algae) - 72 h (OECD Test Guideline 201)

12.2. Persistence and degradability

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Persistence and degradability	Rapidly degradable
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Ethanol (64-17-5)

Persistence and degradability	Rapidly degradable
Biochemical oxygen demand (BOD)	0.93 – 1.67 g O ₂ /g substance
ThOD	2.1 g O ₂ /g substance
Biodegradation	≈ 95 % - Aerobic - Exposure time 15 d Result: Readily biodegradable. (OECD Test Guideline 301E)

AGAROSE (9012-36-6)

Persistence and degradability	Rapidly degradable
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12.3. Bioaccumulative potential

Ethanol (64-17-5)

Partition coefficient n-octanol/water (Log Kow)	-0.3
Bioaccumulative potential	Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

12.4. Mobility in soil

No additional information available

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12.5. Results of PBT and vPvB assessment

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Results of PBT assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
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12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH article 57(f) or commission delegated regulation (EU) 2017/2100 or commission regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Product residues are to be disposed of in compliance with national and regional regulations dispose. Keep chemicals in original containers. Not with other waste mix. Uncleaned containers are to be treated according to the product. Pay attention to the waste policy 2008/98/EG.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
14.1. UN number or ID number		
Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name		
Not dangerous goods	Not dangerous goods	Not dangerous goods
14.3. Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
14.4. Packing group		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No
No supplementary information available		

14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

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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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Not applicable.

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Seveso Directive (Disaster Risk Reduction)

Seveso Additional information : Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : FLAMMABLE LIQUIDS

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG).
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).

Storage class (LGK, TRGS 510) : LGK 3 - Flammable liquids.

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

15.2. Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

Full text of H- and EUH-statements:

Flam. Liq. 2	Flammable liquids, Category 2
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Full text of H- and EUH-statements:

Flam. Liq. 3	Flammable liquids, Category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.

Safety Data Sheet (SDS), EU

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.