

Safety Data Sheet

Agar-agar

Version: V1.0.0.1

Report No.: HGNM17FUVJ

Creation Date: 2017/06/26

Revision Date: 2017/06/26

***Prepared according to EU regulation No. 1907/2006**

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

Product identifier

Product Name	Agar-agar
Model/Specification	Q/QS/QH 25kg/bag
CAS No.	9002-18-0
EC No.	232-658-1
Molecular Formula	-
REACH Registration Number	-

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

Relevant identified uses	Agar-agar includes properties for gelation, thickening, emulsification, stability and assignment, etc. It is widely used in yogurt, sweets, spoons, pastries, pies, beverages, ice cream, canning, meat products, jam, dairy processing, and in microbiology, tissue culture and medicine.
Uses advised against	No special note.

2 Hazards identification

CLP classification according to Regulation (EC) No. 1272/2008

According to Regulation (EC) No 1272/2008 and its amendments. Not classified as a dangerous substance.

Label elements

Hazard pictograms	Not applicable
Signal word	Not applicable

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Hazard statements

Hazard statements	Not applicable
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Precautionary statements

◆ Prevention

Prevention	Not applicable
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◆ Response

Response	Not applicable
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◆ Storage

Storage	Not applicable
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◆ Disposal

Disposal	Not applicable
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Other hazards

	Not applicable
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3 Component

Component	Cas No.	EC No.	Index No.	INS No.	Hazard classification according to CLP	Concentration (weight percent, %)
Agar-agar	9002-18-0	232-658-1	-	406	Not Classified	100

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4 First aid measures

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye contact	Rinse thoroughly with water and consult a physician if feel uncomfortable.
Skin contact	No harm in general situation. First aid is not needed.
Ingestion	No harm in general situation. First aid is not needed.
Inhalation	Move victim into fresh air. Keep breathing smooth. If feeling uncomfortable, consult a physician immediately.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

- 1 Please see section 11.

Indication of any immediate medical attention and special treatment needed

- 1 Treat symptomatically.
- 2 Symptoms may be delayed.

5 Firefighting measures

Extinguishing media

Suitable extinguishing media	Dry chemical, carbon dioxide or alcohol-resistant foam.
Unsuitable extinguishing media	Do not use a solid water stream.

Specific hazards arising from the substance or mixture

- 1 May expansion or decompose explosively when heated or involved in fire.
- 2 Development of hazardous combustion gases or vapor possible in the event of fire.

Advice for firefighters

- 1 As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
- 2 Prevent fire extinguishing water from contaminating surface water or the ground water system.
- 3 Suppress (knock down) gases/vapor/mists with water spray.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

1	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
2	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
3	Use personal protective equipment. Avoid breathing vapours, mist, gas or dust.

Environmental precautions

1	Prevent further leakage or spillage if safe to do so.
2	Prevent leakage into the water, sewer, basement or confined space.

Methods and materials for containment and cleaning up

1	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
2	Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
3	Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7 Handling and storage

Precautions for handling

◆ Protective measures

1	Handling is performed in a well ventilated place.
2	Avoid inhalation of dust or mist.

◆ Measures to prevent fire

1	Keep away from heat/sparks/open flames/ hot surfaces.
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◆ Measures to prevent aerosol and dust generation

1	Avoid formation of dust and aerosols.
2	Provide appropriate exhaust ventilation at places where dust is formed.

◆ Advice on general occupational hygiene

1	Wash hands and face after using of the substances.
2	Replace the contaminated clothing immediately.

Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/ hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

Specific end uses

1	In addition to use mentioned in the first parts, unforeseen other specific end uses.
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8 Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

Occupational Exposure limit values	No information available
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Biological limit value:

Biological limit values	No information available
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Monitoring methods

1	EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
2	GBZ/T 160.1~GBZ/T 160.81-2004 Determination of toxic substances in workplace air (Series standard) .

Derived No effect level (DNEL)

Component	Route of exposure	DNEL for Workers			
		Acute effects (local)	Acute effects (systemic)	Chronic effects (local)	Chronic effects (systemic)
Agar-agar 9002-18-0	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available

Predicted No Effect Concentration (PNEC)

Predicted No Effect Concentration (PNEC)	No information available
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Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Use explosion-proof electrical/ventilating/lighting/equipment.
4	Set up emergency exit and necessary risk-elimination area.

Personal protection equipment

General requirement	No special requirements, please see the description below.
Eye protection	In general situation, eye protection is not needed. In the production process, when contacting with dust, tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US).
Hand protection	In general situation, hand protection is not needed.
Respiratory protection	In general situation, respiratory protection is not needed. If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.
Skin and body protection	In general situation, skin and body protection are not needed.

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9 Physical and chemical properties

Physical and chemical properties

Appearance	Off white or light yellow powder
Odor	Odorless
Odor threshold	No information available
pH	5~9
Melting point/freezing point(°C)	No information available
Initial boiling point and boiling range(°C)	> 35
Flash point(Closed cup, °C)	Not applicable
Evaporation rate	Not applicable
Flammability	Not flammable
Upper/lower explosive limits[%(v/v)]	Upper limit: No information available; Lower limit: No information available
Vapor pressure	Not applicable
Vapor density(Air = 1)	Not applicable
Relative density(Water=1)	> 1
Solubility	Dissolved in heat
n-octanol/water partition coefficient	< 4
Auto-ignition temperature(°C)	No information available
Decomposition temperature(°C)	> 100
Viscosity	≥2.0 mPa·s
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing

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10 Stability and reactivity

| Stability and reactivity

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical stability	Stable under proper operation and storage conditions.
Possibility of hazardous reactions	No information available.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	Strong oxidizing agent.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

| Acute toxicity

Component	Cas No.	LD ₅₀ (oral)	LD ₅₀ (dermal)	LC ₅₀ (inhalation,4h)
Agar-agar	9002-18-0	16000mg/kg(Rat)	No information available	No information available
ADI is not subject to restrictions				

| Carcinogenicity

ID	Cas No.	Component	IARC	NTP
1	9002-18-0	Agar-agar	Not Listed	Not Listed

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Others

Agar-agar(Component)	
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Based on available data, the classification criteria are not met
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	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
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Reproductive toxicity(additional)	Based on available data, the classification criteria are not met

12 Ecological information

Acute aquatic toxicity

Acute aquatic toxicity	No information available
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Chronic aquatic toxicity

Chronic aquatic toxicity	No information available
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Persistence and degradability

Persistence and degradability	No information available
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Bioaccumulative potential

Bioaccumulative potential	No information available
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Mobility in soil

Mobility in soil	No information available
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Results of PBT and vPvB assessment

Component	Cas No.	Results of PBT and vPvB assessment (according to (EC) No 1907/2006)
Agar-agar	9002-18-0	not PBT/vPvB

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13 Disposal considerations

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section 13.1 and 13.2.

14 Transport information

Label and Mark

Transporting Label	Not applicable
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IMDG-CODE

IMDG-CODE	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
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ICAO/IATA-DG

ICAO/IATA-DG	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
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UN-ADR

UN-ADR	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
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15 Regulatory information

International chemical inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS	ENCS
Agar-agar	✓	✓	✓	✓	✓	✓	✓	✓	✗

【EINECS】 European Inventory of Existing Commercial Chemical Substances

【TSCA】 United States Toxic Substances Control Act Inventory

【DSL】 Canadian Domestic Substances List

【IECSC】 China Inventory of Existing Chemical Substances

【NZIoC】 New Zealand Inventory of Chemicals

【PICCS】 Philippines Inventory of Chemicals and Chemical Substances

【KECI】 Existing and Evaluated Chemical Substances

【AICS】 Australia Inventory of Chemical Substances

【ENCS】 Existing And New Chemical Substances

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European chemical inventory

Component	A	B	C	D	E	F	G
Agar-agar	x	x	x	✓	x	x	x

【A】 Candidate list of Substances of Very High Concern for authorization under EU REACH regulation

【B】 Substances requiring authorisation under EU REACH regulation

【C】 Substances restricted under EU REACH

【D】 Pre-registered substances under EU REACH

【E】 Registered substances under EU REACH

【F】 Substance Evaluation – CoRAP under EU REACH

【G】 List of priority substances under EU water policy (Directive 2455/2001/EC)

Note

"✓" Indicates that the substance included in the regulations

"x" That no data or included in the regulations

16 Others

Information on revision

Creation Date	
Revision Date	
Reason for revision	

Reference

[1]IPCS: The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>. [2]IARC, website: <http://www.iarc.fr/>.

[3]OECD: The Global Portal to Information on Chemical Substances, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en.

[4]CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>.

[5]NLM: ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>.

[6]EPA: Integrated Risk Information System, website: <http://cfpub.epa.gov/iris/>.

[7]U.S. Department of Transportation: ERG, website: <http://www.phmsa.dot.gov/hazmat/library/erg>.

[8]Germany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

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| Abbreviations and acronyms

CAS –Chemical Abstracts Service

PC-STEL- Short term exposure limit

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC₅₀ - Lethal Concentration 50%

NOEC -No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

BCF - Bioconcentration factor (BCF)

IMDG-International Maritime Dangerous Goods

UN-The United Nations

NFPA-National Fire Protection Association

CMR - Carcinogens, mutagens or substances toxic to reproduction

PC-TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

PNEC –Predicted No Effect Concentration

LD₅₀ - Lethal Dose 50%

EC₅₀ - Effective Concentration 50%

POW - Partition coefficient Octanol: Water

vPvB - very Persistent, very Bioaccumulative

ICAO/IATA-International Civil Aviation Organization/International Air Transportation Association

ACGIH-American Conference of Governmental Industrial Hygienists

OECD-Organization for Economic Co-operation and Development

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