



Product Name: Glycerine. Min. 99.5%. Pharma. Vegetable. Non-GMO. ex EU

Batch Number: 43791022

Expiry Date: November 2022

CERTIFICATE OF ANALYSIS

| Test Description | Specification | Result |
|---|------------------|----------|
| Glycerine Assay E422 and EP (% m/m): | 99.5 – 101.0 min | 100.0 |
| Acrolein formation on heating E422 (Id A): | Complies | Complies |
| Specific gravity (25/25 deg C) E422 (Id B): | 1.257 min | 1.262 |
| Refractive Index at 20 deg C E422 and EP (Id C): | 1.471 – 1.474 | 1.474 |
| Water, Karl Fischer EP (%): | 0.5 max | 0.07 |
| Sulphated Ash E422 and EP (%): | 0.01 max | 0.00 |
| Colour APHA: | 10 max | 1 |
| Butanetriols E422 (%): | 0.2 max | Complies |
| Acroleine, Glucose, Ammonium Compounds E422: | Complies | Complies |
| 3-MCPD E422 (%): | Complies | Complies |
| Fatty Acids and Ester E422 (as Butyric Acid) (%): | 0.1 max | Complies |
| Chlorinated Compounds E422 (ppm): | 30 max | Complies |
| Arsenic E422 (mg/kg): | 3 max | Complies |
| Lead E422 (mg/kg): | 2 max | Complies |
| Mercury E422 (mg/kg): | 1 max | Complies |
| Cadmium E422 (mg/kg): | 1 max | Complies |
| Heavy Metals E422 and EP (ppm): | 5 max | Complies |
| Identification A, B, C and D EP: | Complies | Complies |
| Appearance of solution EP: | Complies | Complies |
| Acidity and Alkalinity EP (ml 0.1M NaOH): | 0.2 max | Complies |
| Aldehydes EP (ppm): | 10 max | Complies |
| Esters EP (ml 0.1M HCl): | 8.0 min | 9.2 |
| Impurity A and Related Substances EP: | Complies | Complies |
| Halogenated Compounds EP (ppm): | 35 max | Complies |
| Sugars EP: | Complies | Complies |
| Chlorides EP (ppm): | 10 Max | Complies |

Manufactured from vegetable oil. Complies with the requirements of current editions for Glycerine of EP, EU Regulations 231/2012 (Glycerol E422), 68/2013 and Codex Alimentarius.

The results given above are based on analysis carried out by the manufacturer. Some parameters not tested each batch and determined statistically.

Receipt of this certificate does not free the customer from carrying out their own inspection and testing to verify the product is suitable for use.



ALLERGEN STATEMENT
VEGETABLE-BASED GLYCERINE

Vegetable-based Glycerine from mixed feed stocks does not contain any Allergenic material.



Aug 2017

ORIGIN OF VEGETABLE-BASED KOSHER GLYCERINE

As the Glycerine from our supplier is from multiple manufacturing sites it is not practical to maintain Manufacturing Flow Charts from all. Instead please see the below documents.

All material supplied by MADAR Corporation Ltd conforms to a Minimum 99.5% Purity, non-GM, Vegetable-based Specification.

All product is Kosher-certified by the manufacturing site.

All material is Halal – suitable.

Standard Vegetable-based product is from mixed feed stocks - which can include Coconut, Palm, Rapeseed, Soya etc. - or any combination of these.

Our supplier of Glycerine is BRC-accredited and sources from accredited & audited Glycerine manufacturing sites in :

Malaysia

Germany

Belgium

France

Holland

United Kingdom

All manufacturing sites have a MINIMUM of ISO9001 accreditation and a HACCP plan implemented.

Whilst we are unable to guarantee material from a specific manufacturing site, material supplied will always be from a European manufacturing site (countries listed above) and to our Specification.

HAZARD ANALYSIS AND RISK ASSESSMENT: GLYCERINE

| Process Step | Potential Hazards | Hazard Risk Analysis | | | Control Measures (CM) | Risk Rating After (CM) | Decision Tree CCP Questions | | | | | | CCP No | Justification | Vulnerability Groups | Measures to Control Adulteration |
|-------------------------------------|---|----------------------|----------|-------------|--|------------------------|-----------------------------|-----|------|-----|-----|-----|--------|--|--|---|
| | | Likelihood | Severity | Risk Rating | | | Q 1 | Q 2 | Q 2a | Q 3 | Q 4 | Q 5 | | | | |
| 1. Raw Material Purchase | Physical, Chemical Contamination due to: Materials supplied not to specification or to expected quality (ie) damaged packs, pest damage | 2 | 2 | 4 | Approved Suppliers | 2 | Y | | | | | | No | Purchase from Approved Suppliers | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | Use Reputable Suppliers |
| 2. Intake food materials/ packaging | Physical, Chemical Contamination due to: Materials supplied not to specification or to expected quality (ie) damaged packs, pest damage | 3 | 4 | 12 | 1. Approved Suppliers 2. Odour 3. Colour 4. Packaging 5. Delivery vehicle condition 6. Delivery Documentation 7. Certificate of Analysis | 8 | N | Y | - | Y | | | CCP1 | 1. Must comply to specification 2. Purchase from Approved Suppliers | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | Use reputable Suppliers, Check load on delivery by trained operatives |
| 3/9. Ambient Storage | Physical foreign body contamination from damaged packaging or uncovered packaging materials and poor environmental conditions | 2 | 2 | 4 | 1. Visual checks 2. Stock Control 3. Storage Procedure QPS 28.0 | 2 | Y | | | | | | No | 1. All stored products must be covered 2. Storage area must be clean and intact | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | Use reputable Suppliers, Check load on delivery by trained operatives |
| | Microbial contamination due to out of date product | 2 | 2 | 4 | 1. Visual checks 2. Stock Control 3. Storage Procedure QPS 28.0 | 2 | Y | | | | | | No | All food materials to be used within shelf life | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | Use reputable Suppliers, Check load on delivery by trained operatives |
| | Chemical contamination due to poor storage of allergenic food materials | 2 | 2 | 4 | 1. Visual checks 2. Stock Control 3. Storage Procedure QPS 28.0 | 2 | Y | | | | | | No | 1. All stored products must be covered 2. Storage area must be clean and intact | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | Use reputable Suppliers, Check load on delivery by trained operatives |

HAZARD ANALYSIS AND RISK ASSESSMENT: GLYCERINE

| Process Step | Potential Hazards | Hazard Risk Analysis | | | Control Measures (CM) | Risk Rating After (CM) | Decision Tree CCP Questions | | | | | | CCP No | Justification | Vulnerability Groups | Measures to Control Adulteration |
|--------------|--|----------------------|----------|-------------|--|------------------------|-----------------------------|----|-----|----|----|----|--------|---|--|-------------------------------------|
| | | Likelihood | Severity | Risk Rating | | | Q1 | Q2 | Q2a | Q3 | Q4 | Q5 | | | | |
| 4. De box | Physical foreign body contamination from damaged or incorrectly removed packaging | 2 | 2 | 4 | Visual checks | 2 | N | Y | - | N | N | | No | All secondary packaging must be removed | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | Trained Staff, Supervised QA Checks |
| 5. Fill | Physical contamination due to people/ equipment/ environment | 4 | 4 | 16 | 1. Visual checks 2. 800 micron filter in place 3. Staff Training | 8 | N | Y | - | Y | | | CCP 2 | All products individually packed and filter checked for integrity | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | Trained Staff, Supervised QA Checks |
| | Chemical contamination due to people/ equipment/ environment/ poor cleaning/ allergens | 2 | 3 | 6 | 1. Visual checks 2. Hygiene procedures 3. Staff Training | 3 | N | Y | - | N | N | | No | All products individually packed and filter checked for integrity | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | Trained Staff, Supervised QA Checks |
| | Microbial contamination due to people/ equipment/ environment/ poor cleaning | 2 | 3 | 6 | 1. Visual checks 2. All containers certificated 3. Hygiene procedures 4. Staff Training | 3 | N | Y | - | N | N | | No | All products individually packed and tested | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | Trained Staff, Supervised QA Checks |
| 6. Weigh | No perceived hazards | | | | | | | | | | | | | | | |
| 7. Lid | Microbial contamination due to multiplication of pathogenic bacteria from poor seal | 2 | 3 | 6 | Visual Inspection | 3 | N | Y | - | N | N | | No | 1. Quality Checks 2. Trained Staff | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | Trained Staff, Supervised QA Checks |

HAZARD ANALYSIS AND RISK ASSESSMENT: GLYCERINE

| Process Step | Potential Hazards | Hazard Risk Analysis | | | Control Measures (CM) | Risk Rating After (CM) | Decision Tree CCP Questions | | | | | | CCP No | Justification | Vulnerability Groups | Measures to Control Adulteration |
|--------------|--|----------------------|----------|-------------|--|------------------------|-----------------------------|----|-----|----|----|----|--------|---|--|---|
| | | Likelihood | Severity | Risk Rating | | | Q1 | Q2 | Q2a | Q3 | Q4 | Q5 | | | | |
| | Physical contamination due to poor seal | 2 | 3 | 6 | Visual Inspection | 3 | N | Y | - | N | N | | No | 1. Quality Checks 2. Trained Staff | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | Trained Staff, Supervised QA Checks |
| 8. Label | Microbial contamination due to incorrect label applied | 2 | 3 | 6 | Visual Inspection | 3 | N | Y | - | N | N | | No | 1. Quality Checks 2. Trained Staff | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | Trained Staff, Supervised QA Checks |
| 10. Pick | Physical / Chemical contamination due to uncovered/ damaged product | 2 | 2 | 4 | Visual Inspection | 2 | Y | Y | - | N | Y | Y | No | All products are covered and intact | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | Trained Staff, Supervised QA Checks |
| 11. Load | Physical/ Chemical contamination due to uncovered product/ damaged product | 2 | 2 | 4 | Visual Inspection | 2 | Y | Y | - | N | Y | Y | No | All products are covered and intact | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | Vehicles sealed on loading, Trained Staff, Supervised QA Checks, Recall Procedure and Recall Team |
| 12. Despatch | Physical/ Chemical contamination due to damaged product, packaging, dirty vehicle, stored with incompatibles | 2 | 2 | 4 | 1. Visual Inspection 2. Vehicle hygiene check 3. Approved Hauliers | 2 | Y | Y | - | N | Y | Y | No | 1. No damaged products or packs 2. Do not load onto dirty vehicles 3. Use Approved Hauliers | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | Vehicles sealed on loading, Trained Staff, Supervised QA Checks, Recall Procedure and Recall Team |

HAZARD ANALYSIS AND RISK ASSESSMENT: GLYCERINE

| Process Step | Potential Hazards | Hazard Risk Analysis | | | Control Measures (CM) | Risk Rating After (CM) | Decision Tree CCP Questions | | | | | | CCP No | Justification | Vulnerability Groups | Measures to Control Adulteration |
|--------------|---|----------------------|----------|-------------|-----------------------|------------------------|-----------------------------|----|-----|----|----|----|--------|---|--|----------------------------------|
| | | Likelihood | Severity | Risk Rating | | | Q1 | Q2 | Q2a | Q3 | Q4 | Q5 | | | | |
| 13. Waste | Microbial contamination from waste improperly disposed of | 2 | 2 | 4 | Visual inspection | 2 | Y | | | | | | No | 1. Waste must be placed continuously in lidded bins 2. Trained Staff | Allergen Sufferers, Young, Old, Ill, Susceptible to food poisoning and choking on FB's | |



SAFETY DATA SHEET

GLYCERINE (VEG) 99.5% RAPESEED DERIVED

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

1.1. Product identifier

Product name: Glyceryl (Veg) 99.5% RAPESEED DERIVED
REACH registered number(s): EXEMPT 190712006/EC ANNEX V.9
Product code: WAXGLYCPEG100
CAS number: 56-81-5
EINECS number: 200-289-5
Synonyms: GLYCERINE E 422 1,2,3-PROPANE TRIOL

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

1.3. Details of the supplier of the safety data sheet

Company name: MADAR Corporation Ltd
19-20 Sandleheath Industrial Estate
Fordingbridge
Hampshire
SP6 1PA
UK
Approved sellers: Mystic Moments, New Directions UK, World of Moulds

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: This product has no classification under CLP.

2.2. Label elements

Label elements: This product has no label elements.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.



Section 3: Composition/information on ingredients

3.1. Substances

Chemical identity: GLYCERINE (VEG) 99.5% BPIEP E422 (*WEL)

Contains: Glycerine

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes. Consult a doctor.

Ingestion: Wash mouth out with water.

Inhalation: Consult a doctor.

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

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: No symptoms.

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

Immediate/ special treatment: Not applicable.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labeled salvage container for disposal by an appropriate method.



6.4. Reference to other sections

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Not applicable

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed.

Suitable packaging: Polyethylene. Steel drums.

7.3. Specific end use(s)

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: Not applicable.

Respiratory protection: Respiratory protection not required.

Hand protection: Protective gloves.

Eye protection: Safety goggles. Ensure eye bath is at hand.

Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Colourless

Odour: Odourless

Solubility in water: Miscible in all proportions

Also soluble in: Most organic solvents.

Evaporation rate: Negligible

Melting point/range°C: 17.8

Flash point°C: 177

Viscosity: Viscous

Boiling point/range°C: 290

Relative density: 1.263 @ 75 degC

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.
Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity Values: Not applicable

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: No symptoms.

Delayed/ immediate effects: No data available.

Other information: Not applicable.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values: No data available.

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

12.4. Mobility in soil

Mobility: Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Negligible ecotoxicity.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Recovery operations: Not applicable.

Disposal of packaging: Arrange for collection by specialised disposal company.



Section 14: Transport information

Transport class: This product does not require a classification for transport.

Section 15: Regulatory information

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

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

Legal disclaimer: * The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product. Material sold under the MADAR Corporation Ltd trade marks are manufactured by 3rd party suppliers.



PRODUCT SPECIFICATION

GLYCERINE

VEGETABLE-BASED 99.5% MINIMUM E.P.

| | |
|---------------------------------|----------------|
| ASSAY : | 99.5% m/m Min. |
| IDENTIFICATIONS A, B, C and D : | COMPLIES E.P. |
| APPEARANCE OF SOLUTION : | CLEAR |
| ACIDITY, ALKALINITY (0.1m NaOH) | 0.2ml max. |
| REFRACTIVE INDEX @ 20°C : | 1.471 – 1.474 |
| ALDEHYDES : | 10 PPM Max. |
| HALOGENATED COMPOUNDS : | 35 PPM Max. |
| ESTERS (0.1M HCl) : | 8.0ml Min. |
| SUGARS : | COMPLIES E.P. |
| CHLORIDES : | 10 PPM Max. |
| HEAVY METALS (PPM) : | 5mg/kg |
| WATER : | 0.5% Max. |
| SULPHATED ASH : | 0.01% Max. |
| COUNTRY OF ORIGIN: | Germany |

COMPLIES WITH EUROPEAN PHARMACOEPIA (E.P.), COMPLIES WITH E422 APPROVED FOR USE IN FOOD.

KOSHER-CERTIFIED

NON-GMO.