



## CERTIFICATE OF ANALYSIS

Product	Sunflower Lecithin Liquid
Batch Number	4448917
Expiry Date	October 2024
Origin	Ukraine, standardised in The Netherlands

### Test

### Results of Composite

#### Physical and chemical analysis

Viscosity at 25degrees C (poises)	119.20
Gardner colour (Solution 10%)	11.0
Moisture, Karl Fischer (%)	0.63
Acid Value (mg KOH/g)	22.0
Peroxide Value (meq O <sub>2</sub> kg)	<0.1
Acetone Insoluble (%)	62.50
Hexane Insoluble (%)	0.25

#### Microbiological Analysis

Total Plate count (cfu/g)	<10
Yeasts & Moulds (cfu/g)	<10
E.coli (cfu/10g)	Absent
Salmonellas (25g)	Absent
Coliforms (cfu/g)	<10
Enterobacteriaceae (cfu/g)	<10

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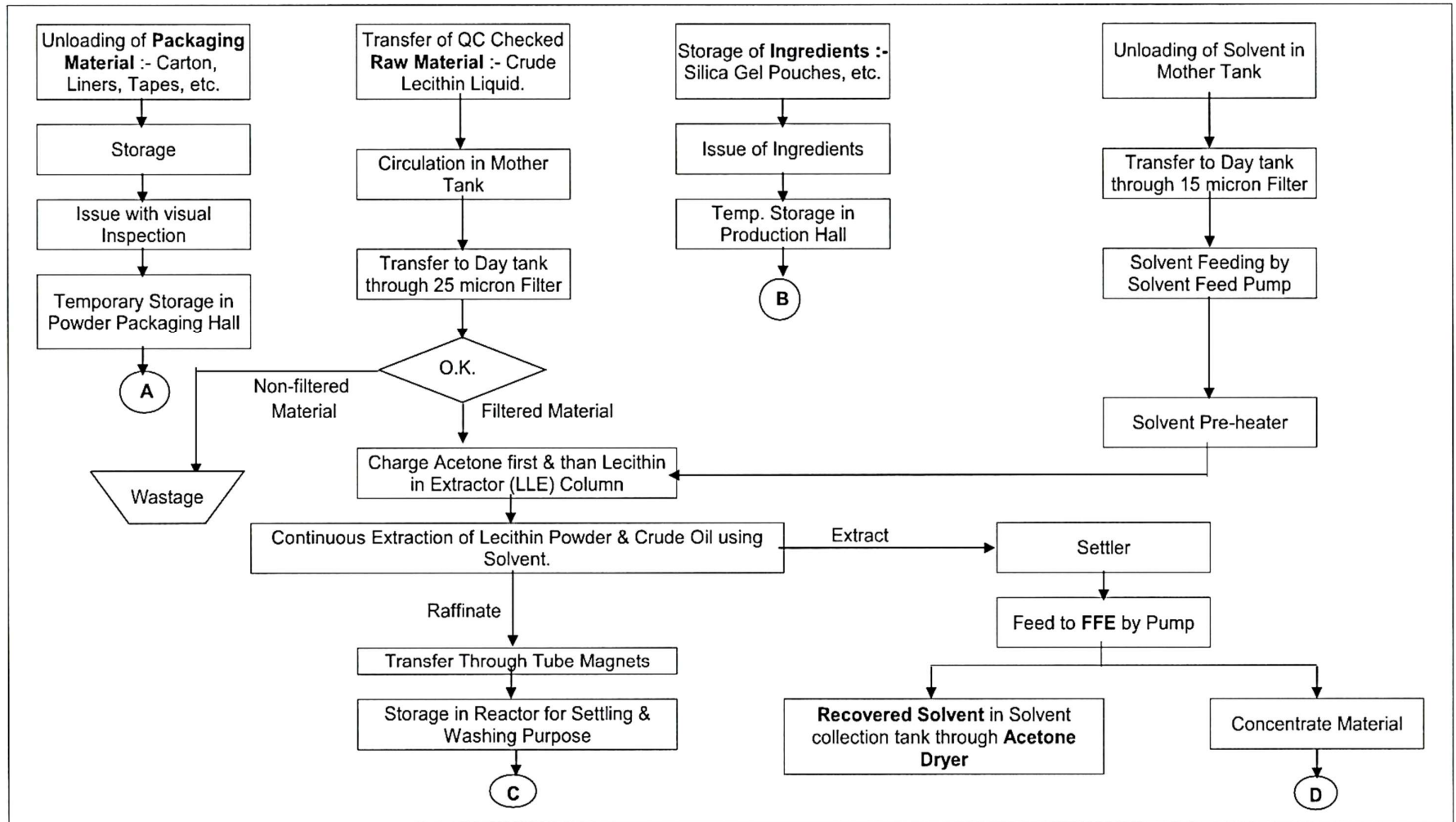
Sunflower Lecithin liquid – Declaration for Allergens

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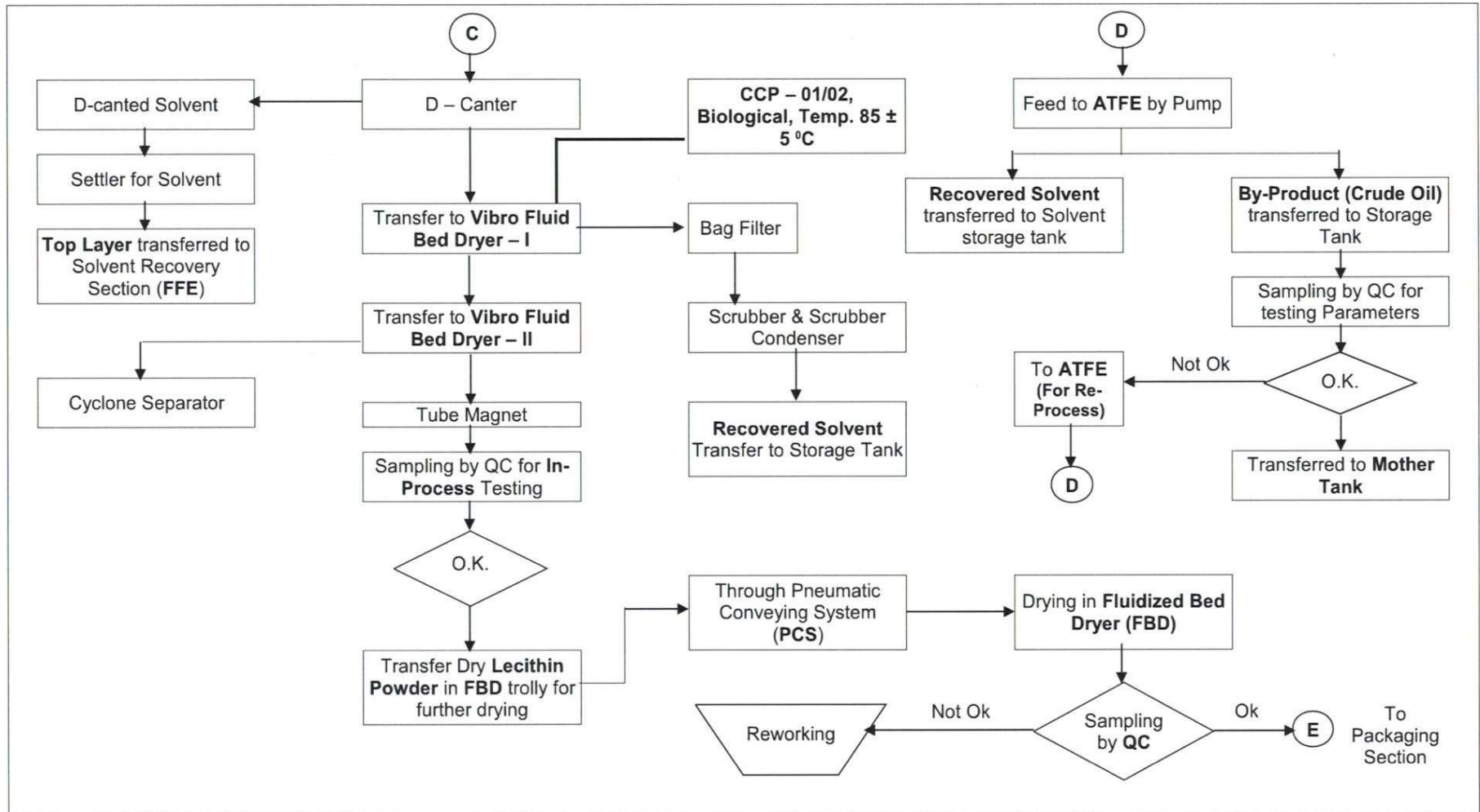
Ingredient Contains:	In Product	Same Line	Same Plant
<b>ALLERGENS:</b>			
Milk / Milk Products (butter, buttermilk, casein, cream, sodium caseinate, curds & whey, cheese, lactose, etc.)	No	No	No
Eggs (albumen, whole egg, yolk)	No	No	No
Fish (freshwater or ocean)	No	No	No
Crustacean (shrimp, prawns, crab, lobster and crayfish, etc.)	No	No	No
Molluscs (abalone, snail, clam, oyster, squid, mussel, etc.)	No	No	No
Tree Nuts (almonds, walnuts, pecans, cashews, Brazil nuts, pistachios, hazelnuts, filberts, pine nuts, macadamia nuts and chestnuts)	No	No	No
Peanuts / Peanut products (meal, etc.)	No	No	No
Soybeans (flour, protein)	No	No	Yes
Wheat (flour, bran, gluten, starch)	No	No	No
Lupine	No	No	No
Mustard	No	No	No
Celery	No	No	No
Grains (barley, millet, oats, rice, rye, sorghum, etc.)	No	No	No
Seed / Seed Oils (sesame, caraway, cottonseed, poppy seed)	No	No	No
Unrefined Oils (soy, corn, tree nut, seed)	No	No	No
<b>SENSITIVE COMPONENTS:</b>			
Gluten (wheat, rye, barley, oats)	No	No	No
Sulphites <10 ppm	No	No	No
Sulphites >10 ppm	No	No	No
HVP (Hydrolysed Vegetable Protein)	No	No	No
Artificial Colouring (including Yellow 5 & 6, Blue 1, etc.)	No	No	No
Caffeine	No	No	No
<b>OTHER:</b>			
Polysorbates	No	No	No
Preservatives: e.g.: antimicrobials – benzoates, sorbates e.g.: antioxidants – BHA, BHT, TBHQ, erythorbates	No	No	No
Bee pollens	No	No	No
Propolis	No	No	No
Royal jelly	No	No	No
peach	No	No	No
Pork	No	No	No
Tomato	No	No	No
mango	No	No	No

22.03.2021

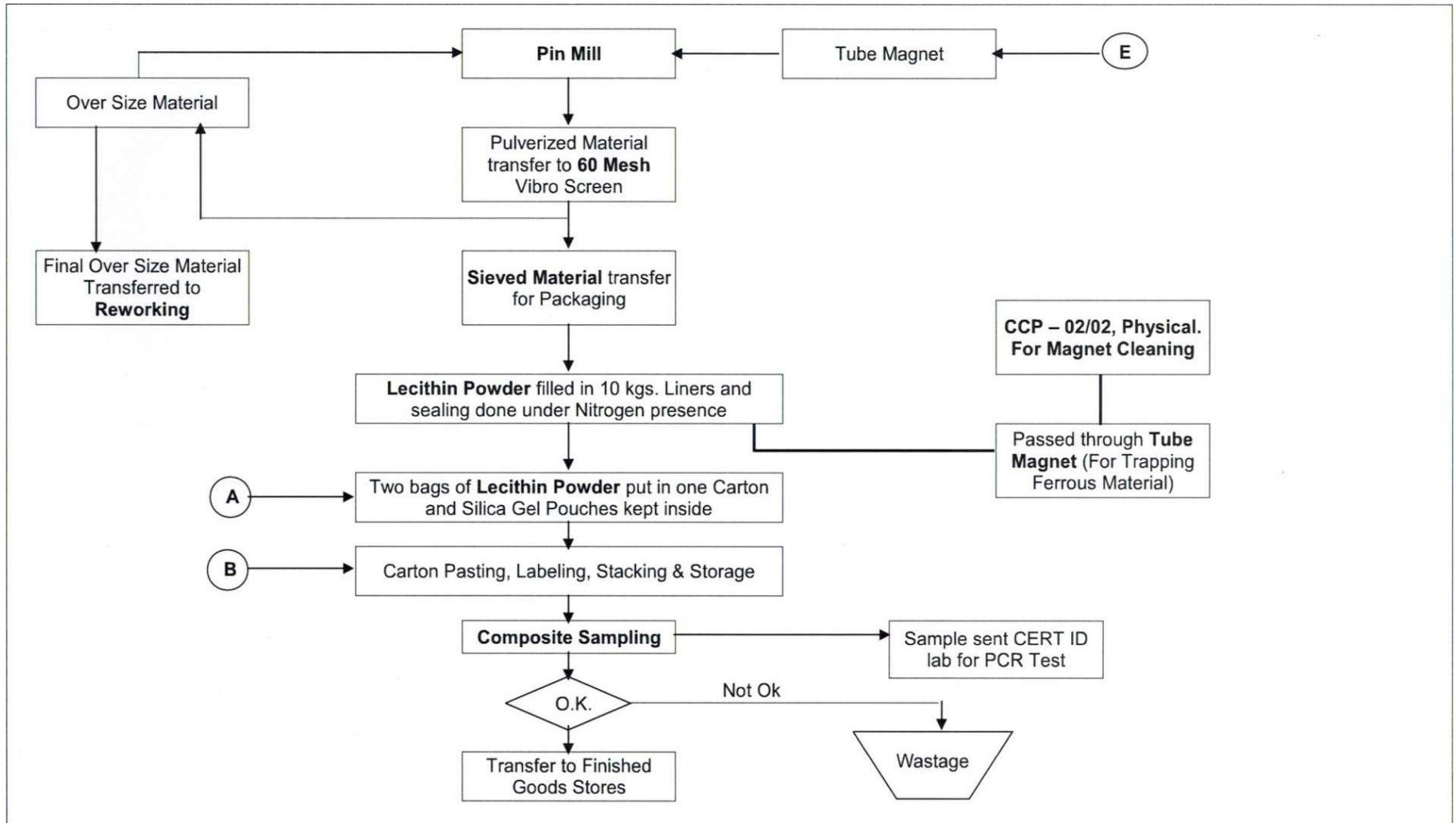
## PROCESS FLOW CHART FOR LECITHIN POWDER PLANT



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Description: **Non GMO** Pure Sunflower Lecithin with high concentration of phospholipids in a free flowing liquid form derived from Sunflower Seeds, and is allergen-free. HS 29232000.

Applications: Made from Sunflower Seeds our lecithin provides a healthy and important culinary ingredient. The benefits of lecithin are used throughout several industries from food to medical applications. An invaluable emulsifier, stabiliser and preservative

#### Typical Analyses:

Parameter	Specification	Method of Analyses
Acetone Insoluble, %	Min 60	AOCS Ja 4-46
Moisture, %	Max 1	AOCS Ja 2b-87
Viscosity, Poise at 25 C	Max 120	AOCS Ja 10-87
Acid Value, mgKOH/g	Max 35	AOCS Ja 6-55
Colour Gardner	Max 14	AOCS Ja 9-87
Peroxide Value, meq O2/kg	Max 5	AOCS Ja 8-87
Hexane/Toluene Insoluble, %	Max 0.3	AOCS Ja 3-87

#### Microbiological Data:

Parameter	Specification	Method of Analyses
Total Plate Count, cfu/g	Max 1000	ISO 4833:2003
Enterobacteriaceae in 25g or cfu/g	Absent / <10	ISO 21528-1
E.Coli, cfu/g	<10	ISO 16649
Coliforms cfu/g	<10	ISO 4832
Yeasts and Moulds, cfu/g	<100	ISO 7954
Salmonellae in 25 g	absent	ISO 6579

#### Heavy metals:

Arsenic max 3mg/kg  
Lead max 2mg/kg  
Mercury max 1mg/kg

#### Ingredients/Labelling:

Emulsifier E322, lecithin (sunflower)

#### Country of origin:

Ukraine, Russia standardised in the Netherlands



**Allergens:**

Produced from sunflower. Absence of cross contamination by allergens according to EU directives (EU) N0 1. 1169/201.

**Storage:**

Store in a dry place away from strong heat and odours.

Shelf life is min 24 months from the date of manufacturing if retained in original packing at ambient conditions.

**Certification:**

The product is Kosher and Halal certified.



## MATERIAL SAFETY DATA SHEET

### Sunflower Lecithin Liquid

#### 01 Identification of the substance / preparation and of the company

**Product:** Sunflower Lecithin Liquid

**Use:** Additive, E322

**Company:** Madar Corporation Limited  
19 - 20 Sandleheath Industrial Estate  
Fordingbridge  
SP6 1PA

**Phone:** +44 (0) 1425 655555

**E-mail:** [technical@madarcorporation.co.uk](mailto:technical@madarcorporation.co.uk)

#### 02 Hazards Identification

No special hazards have to be mentioned.

#### 03 Composition / Information on ingredients

Substance	EINECS/ELINCS	CAS	Range (%)	Symbol / R phr.
Lecithin	232-307-2	8002-43-5	100	

#### 04 First aid measures

General Information Not applicable.

Inhalation Not applicable.

Skin contact Wash with soap and water for 15 minutes.

Eye contact In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

Ingestion None.

Advice to doctor Treat symptomatically.





#### 05 Fire-Fighting Measures

Suitable extinguishing media	Foam. Dry powder. Water spray jet. Carbon dioxide.
Extinguishing media that must not be used.	Full water jet.
Special exposure hazards arising from the substance or preparation itself or combustion products	Risk of formation of toxic pyrolysis products.
Special protective equipment for firefighters	Use self-contained breathing apparatus
Additional information	Fire residues and contaminated firefighting water must be disposed of in accordance with local regulations.

#### 06 Accidental Release Measures

Personal precautions	High risk of slipping due to leakage/spillage of product.
Environmental precautions	Do not discharge into the drains/ surface waters /groundwater. Prevent spread over a wide area (e.g. by containment or oil barriers).
Methods for cleaning up / taking up	Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). Dispose of absorbed material in accordance with the regulations. Take up mechanically.

#### 07 Handling and storage

Advice on safe handling	No special measures necessary if used correctly.
Advice on protection against fire and explosion	No special measures necessary.
Requirements for storage rooms and vessels	Keep only in original container.
Advice on storage compatibility	None.
Further information on storage conditions	Keep container tightly closed. Store in a dry place. Recommended storage temperature: 15-30 °C.

#### 08 Exposure controls / personal protection

Additional advice on system design	Not applicable.
Ingredients with occupational exposure limits to be monitored	Not applicable
Respiratory protection	Not applicable
Hand protection	Not applicable
Eye protection	Not applicable
Skin protection	Not applicable
General protective measures	Avoid contact with eyes.

#### 08 Exposure controls / personal protection

Hygiene measures Wash hands before breaks and after work. Use barrier skin cream.  
 Delimitation and monitoring of the environmental exposition. Not applicable

#### 09 Physical and chemical properties

<b>Form</b>	Viscous Liquid	<b>Vapour pressure (kPa)</b>	Not applicable
<b>Colour</b>	Brown	<b>Density (g/ml)</b>	1.04
<b>Odour</b>	Bland, bean or nutty	<b>Bulk density (kg/m<sup>3</sup>)</b>	Not applicable
<b>pH-value</b>	Not determined	<b>Solubility in water</b>	Immiscible
<b>pH-value 1%</b>	Not determined	<b>Partition coefficient: n-octanol / water</b>	Not determined
<b>Boiling point (°C)</b>	Not determined	<b>Viscosity</b>	Max 12,000 mPa.s at 25°C
<b>Flash point (°C)</b>	>200	<b>Relative vapour density determined in air</b>	Not applicable
<b>Flammability (°C)</b>	Not determined	<b>Evaporation speed</b>	Not applicable
<b>Lower explosion limit</b>	Not applicable	<b>Melting point (°C)</b>	Not determined
<b>Upper explosion limit</b>	Not applicable	<b>Autoignition temperature (°C)</b>	ca. 400°C
<b>Combustible properties</b>	No	<b>Decomposition temperature (°C)</b>	Not determined

#### 10 Stability and reactivity

Hazardous reactions No hazardous reactions known  
 Hazardous decomposition products No hazardous decomposition products known.

#### 11 Toxicological information

Acute oral toxicity OECD 401 Not determined  
 Experiences made in practice None  
 General remarks No toxicological data are available. No classification on the basis of the calculation procedure of the preparation directive.

#### 12 Ecological information

AOX-advice No dangerous components  
 76/464/EC Not applicable  
 General information Ecological data are not available



### 13 Disposal considerations

Disposal / Product	For recycling, contact manufacturer. Disposal in an incineration plant in accordance with the regulations of the local authorities.
Waste. No. (recommended)	070699
Disposal / Contaminated packaging	Uncontaminated packaging may be taken for recycling. Packaging that cannot be cleaned should be disposed of as for product.

### 14 Transport information

#### Classification according to ADR:

Declaration	No dangerous goods
Labelling	
Factor, ADR 1.1.3.6	
LQ, ADR 3.4.6	
Hazard-no	
Label	
Vapour Pressure (kPa)	

#### Classification according to IMDG

Declaration	Not classified as dangerous goods
Labelling	
LQ, (l/kg)	
EmS	

#### Classification according to IATA

Declaration	Not classified as dangerous goods
Labelling	
Label	

### 15 Regulatory information

Labeling	The product does not require a hazard warning label in accordance with EC directives.
Hazard symbols	

#### 15.1 Special labeling for certain preparations

Not applicable

#### 15.2 Sources of documentation

EEC: 91/155 (2001/58); 67/548 (2004/73), 29. ATP; 1999/45 (2001/60); 91/689 (2001/118); 89/542; 1999/13  
Transport information: ADR (2005); IMDG-Code (32.Amdt.); IATA-DGR (2005)



**15.3 National regulations (gb)**

Not determined

**16 Other information**

Information on Ingredients – Not applicable  
Position 02

**16.1 Additional information**

Observe employment restrictions for people	Not applicable
VOC, 1999/13/EC	Not applicable
Customs tariff	Not determined

**16.2 Information on ingredients (648/2004)**

UBA-Registration	Not applicable
648/2004/EC	Not applicable

**16.3 Modified position**

None



## SUNFLOWER LECITHIN LIQUID

**DESCRIPTION:** Pure Sunflower Lecithin with high concentration of phospholipids in a free flowing liquid form derived from Sunflower Seeds, and is allergen-free.

**APPLICATION:** Made from Sunflower Seeds our lecithin provides a healthy and important culinary ingredient. The benefits of lecithin are used throughout several industries from food to medical applications. An invaluable emulsifier, stabiliser and preservative.

**SPECIFICATIONS:** **PHYSICAL & CHEMICAL PARAMETERS**

Description	Viscous Liquid
Appearance	Brown
Taste/odour	Typical Sunflower

Phosphatides (as acetone insoluble %)	Min 60
Moisture (%)	Max. 1.0
Acid Value (mg KOH/g)	Max. 35
Peroxide Value (meg/Kg)	Max. 6
Toluene Insoluble (%)	Max. 0.3
Gardner Colour (10% sol.)	Min 11
Viscosity (at 25 Deg Cen)	Max 120 Poises
Heavy Metals (Lead & Arsenic)	Below Detection Level
Hexane Insoluble (%)	Max 0.3

**MICROBIOLOGICAL CONTROL**

Total Plate Count	Max. 3000/g
Enterobacteriaceae	Negative in 1 cfu/g
E-coli	Negative in 1 cfu/g
Yeast & Moulds	Max. 100/g
Salmonellae	Absent in 25g

**REGULATORY STATUS:**

Sunflower lecithin conforms to the Directive EU Directive 231/2012 (No .E322). Emulsifier Sunflower Lecithin.

**SHELF LIFE:**

18 months from the date of manufacture if retained in original packing away from direct sunlight and air.

Store at 16-32 °C / 60-90 °F.

Storage below 16 °C/60 °C can cause separation.



## Vegetarian and Vegan Suitability

### TO WHOM IT MAY CONCERN

**Re:** Suitability for Vegetarians and Vegans

**Product:** Sunflower Lecithin

Dear Sir/Madam,

We hereby confirm our sunflower lecithin liquid is suitable for vegetarians and vegans.

If you have any queries please contact our quality department.

As supplied by our supplier.