

DATE : 18/07/2019

MATERIAL SAFETY DATA SHEET

1. Chemical Product and Company Identification

- a. Product name : REFINED GLYCERINE 99.7PCT – KOSHER
b. Product code : WILFARIN USP/ EP / BP 995 / 997
c. CAS No. : 56-81-5
d. EC no. : 200-289-5
e. Recommended use : Raw material for manufacturing oleochemical derivatives
f. Manufacturing Site : 1. Natural Oleochemicals Sdn. Bhd.
PLO 428, Jalan Besi Satu, Pasir Gudang Industrial Estate,
81700 Pasir Gudang, Malaysia.
2. Wilmar Nabati Indonesia
Jl. Kapten Darmo Sugondo No. 56, Gresik-61124, East Java,
Indonesia
3. Wilmar Nabati Indonesia Oleochemical
Jl. Pulau Sumatera, Kawasan Industri Dumai, Kelurahan
Pelintung, Medang Kampai Dumai-28816, Riau, Indonesia
4. Wilmar Bioenergi Indonesia
Jl. P. Belitung, Kawasan Industri Dumai, Kelurahan
Pelintung, Medang Kampai Dumai-28882, Riau, Indonesia
5. Adani Wilmar Limited
Village Dhrub Navinal Island, Adani Port Road Mundra – Kutch
(Gujarat), India.

Emergency contact : Dr. Augustine Shak Kim Fui (Natural Oleochemicals Sdn. Bhd)
DL : 607-2533840
e-mail : augustine.shakkimfui@my.wilmar-intl.com

2. Hazards Identification

- a. Hazard classification:
Classification according to Regulation (EC) No 1272/2008
The substance is not classified as hazardous according to the CLP regulation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC
Not applicable.

Information concerning particular hazards for human and environment
Not applicable.
- b. Label elements including precautionary statements
- Pictograms : No Symbol Required
 - Signal words : Non Hazardous

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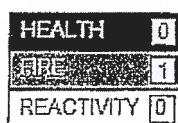
Registered Address:-
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12th Floor, UBN Tower
No. 10, Jalan P. Ramlee
50250 Kuala Lumpur
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Tel : 603-27260088
Fax : 603-27260099

- WHMIS-symbols : Not hazardous under WHMIS.
- NFPA ratings (scale 0 - 4) :



Health = 0
Fire = 1
Reactivity = 0

- HIMS- ratings (scale 0 - 4) :



Health = 0
Fire = 1
Reactivity = 0

- HMIS Long Term Health Hazard Substances
Substance is not listed.
- Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
- Precautionary statements :
Wear protective gloves, protective clothing, eye protection, face protection.
If skin irritation occurs: Get medical advice and attention.
Wash hands thoroughly after handling.
Take off contaminated clothing and wash before reuse.
- c. Other hazards which do not result in classification (e.g. dust explosion hazard):
Depending on practical size and concentration explosive dust/air mixture can be formed.

3. Composition/Information on Ingredients

Chemical Name	INCI	Formula	CAS No	EC No
1,2,3-Propanetriol	Glycerin	C ₃ H ₈ O ₃	56-81-5	200-289-5
Water	Aqua	H ₂ O	7732-18-5	231-791-2

4. First-aid Measures

- a. **Eye contact**
Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention urgently.
- b. **Skin contact**
Wash skin thoroughly with soap and water. Remove contaminated clothing as washing proceeds.
- c. **Inhalation**
Remove from exposure. Keep warm and at rest. Seek medical Attention if you feel unwell.
- d. **Ingestion**
Wash out mouth with water. Do not induce vomiting. Keep warm and at rest. Seek medical.
- e. **Most important acute and delayed symptoms/effects**
None

5. Fire Fighting Measures

- a. **Suitable (and unsuitable) extinguishing media**
Use dry powder, water spray, foam, carbon dioxide for extinguishing. Avoid using large quantities of water.
- b. **Specific hazards arising from the chemical (e.g. hazardous combustion products)**
Irritating and highly toxic gases may be generated by thermal decomposition or combustion.
- c. **Special protective equipment and precautions for fire-fighters**
Wear a self-containing breathing apparatus and full protective gear.

6. Accidental Release Measures

- a. **Measures required for personal protection and protective equipment**
Use rubber gloves, air respirator, goggles, safety shoes and lab coat. Remove contaminated clothing and wash hands between breaks and at end of duty hours. Locate eye washes and emergency showers in all work and storage areas.
- b. **Measures required for environment protection**
Not available
- c. **Clean-up and removal method**
Remove all potential ignition sources. Contain spilled material. Cover with an inert or non-combustible inorganic absorbent material, sweep up and remove to an approved disposal container. Clean with hot water & detergents. Observe state, federal & local disposal regulations.

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7. Handling and Storage

- Precautions for safe handling**
Use in well ventilated areas. Avoid creating dust. Avoid inhaling dust. Avoid contact with skin eyes and clothes. Wear personal protective equipment (see section 8). Wear respiratory protection. Material can be slippery underfoot.
- Conditions for safe storage (including incompatibilities)**
Keep away from drains, soils, surface & ground waters. Store in tightly closed original container when not in use. Storage area should be cool and dry. Keep away from ignition sources & naked flames. Store according to hazard classification.
- Recommended handling temperature** : Refer to Heating Instruction

8. Exposure Controls and Personal Protective Equipment

- Exposure limits of the chemical substance, biological exposure limits and etc.**
Ingredients with limit values that require monitoring at the workplace:
56-81-5 glycerol

PEL (USA)	15* 5** mg/m ³ *total dust **respirable fraction
TLV (USA)	10* ppm *Mist
EL (Canada)	10* 3** mg/m ³ *mist; **mist, resirable
EV (Canada)	10 mg/m ³

- Appropriate engineering controls**
Use normal precautionary measures for handling chemicals.
- Personal protective equipment**
 - Protection of respiratory system : Wear air respirator
 - Eye protection : Wear goggles
 - Hand protection : Wear protective gloves
 - Body protection : Wear protective clothing, safety shoes
 - Hand protection : Wear protective gloves
 - Body protection : Wear protective clothing, safety shoes

9. Physical and Chemical Properties

- Appearance (physical state, color, etc.) : Colourless Hygroscopic viscous liquid
- Melting point : about 18 °C
- Boiling point : 290 - 295 °C @ 760mm Hg
- Flash point : >180 °C
- Density : about 1.24 g/ml at 45 °C
- Particle Size Distribution : Not applicable
- Vapor Pressure : 0.0025 mbar @ 50°C
- Partition coefficient : n-octanol/water : Not available
- Water Solubility : Infinite g/100 ml in water @ 20 °C
- Surface Tension : Not available

k. Auto Flammability	: Not available
l. Flammability	: Not available
m. Explosiveness	: Not available
n. Oxidizing Properties	: Not available
o. Stability in organic solvent	: Not available
p. Dissociation constant	: Not available
q. Viscosity	: Not available
r. pH	: 6 - 7

10. Stability and Reactivity

- Chemical stability: Able to polymerise above 149 deg C. Decomposes when heated above 290 deg C.
- Possibility of hazardous reactions: Not available
- Conditions to avoid (e.g. static discharge, shock, vibration, etc.): Strong oxidizing agents
- Incompatible materials: Strong acid
- Hazardous decomposition products
Thermal decomposition or burning may produce carbon monoxide and/or Carbon Dioxide

11. Toxicological Information

a. Information on toxicological effects

Acute toxicity

LD50 (Oral, rat) = >12600 mg/kg

LC50(Inhalation, rat) = >570mg/m3/1Hr

Skin corrosion/irritation	: Not available
Serious eye damage/eye irritation	: Not available
Respiratory or skin sensitization	: Not available
Germ cell mutagenicity	: Not available
Carcinogenicity	: Not available
Reproductive toxicity	: Not available
Specific target organ toxicity (single exposure)	: Not available
Specific target organ toxicity (repeated exposure)	: Not available
Aspiration Hazard	: Not available
Potential health effects	
Inhalation	: Not available
Ingestion	: Not available
Skin	: Not available
Eyes	: Not available

Signs and symptoms of exposure:

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

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12. Effects on the Environment

- a. Toxicity :
- Acute fish toxicity: LC 50 > 10000 mg product/l.
Carp, LC50:>1000mg/L(48h);
Acute bacteria toxicity: EC 50 > 10000 mg product/l.
Daphnia magna, EC50:>1000mg/L(3h)
- b. Persistence and degradability : Readily biodegradable
- c. Bioaccumulative potential : Not available
- d. Mobility in soil : Not available
- e. Other adverse effects : Not available

13. Disposal Considerations

- a. Disposal methods: Waste may be disposed of by a licensed waste disposal company. Follow local, state and federal disposal regulations.
- b. Precautions for disposal (including the disposal method of contaminated containers and packages).
Product and packaging should be disposed of in accordance with the local, state and federal regulations.

14. Transport Information

- a. UN number :
DOT, ADR, ADN, IMDG, IATA Not Regulated
- b. UN proper shipping name :
DOT, ADR, ADN, IMDG, IATA Not Regulated
- c. Transport hazard classes :
DOT, ADR, ADN, IMDG, IATA Class Not Regulated
- d. Packing group, if applicable : Not available
- e. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
UN "Model Regulation": Not Applicable
- f. Environmental hazard :
Marine pollutant (yes/no) : No

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15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture
United States (USA)

SARA

Section 355 (extremely hazardous substances):

Substance is not listed.

Section 313 (Specific toxic chemical listings):

Substance is not listed.

TSCA (Toxic Substances Control Act):

Substance is listed.

Proposition 65 (California):

Chemicals known to cause cancer:

Substance is not listed.

Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

Chemicals known to cause developmental toxicity:

Substance is not listed.

Carcinogenic Categories

EPA (Environmental Protection Agency)

Substance is not listed.

IARC (International Agency for Research on Cancer)

Substance is not listed.

TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

Canada

Canadian Domestic Substances List (DSL)

Substance is listed.

Canadian Ingredient Disclosure list (limit 0.1%)

Substance is not listed.

Canadian Ingredient Disclosure list (limit 1%)

Substance is not listed.

National regulations:

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57

Substance is not listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out

16. Other Information

This information presented here is believed to be accurate and pertains only to the product when stored in a sealed condition, as prescribed above. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product. Manufacturer shall in no way be liable for any claims, losses and damages of any third party, or for lost profits, or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, from the use of this product.

for and on behalf of
NATURAL OLEOCHEMICALS SDN BHD.

