CERTIFICATE OF ANALYSIS

PRODUCT NAME: GLYCERINE

BATCH NUMBER: 4550302

BEST BEFORE DATE: 07/2027

PROPERTY	SPECIFICATION	RESULT
APPEARANCE	COLOURLESS	CONFORMS
APPEARANCE OF SOLUTION	CLEAR	CONFORMS
SMELL	ABSENT	CONFORMS
ESTER	MIN 8,0 ml	8.89
COLOUR (APHA)	MAX 10	3 HAZEN
WATER	MAX 0,5 %	0,041%
REFRACTIVE INDEX @ 20°C	1,471 – 1,474	1,474
DENSITY @ 20°C	MIN 1,260 g/cm^3	1,261
ACIDITY	MAX 0,2 ml	0,05
ALDEHYDES	MAX 10 mg/kg	PASSES
HALOGENATED COMPOUNDS	MAX 30 mg/kg	PASSES
CHLORIDES	MAX 10 mg/kg	PASSES
SUGARS	NEGATIVE	CONFORMS
ACROLEINE, GLUCOSE, AMMONIUMCOMPOUNDS	NEGATIVE	CONFORMS
ASSAY	MIN 99,5 %	99,7%

3-MCPD	MAX 0,1 mg/kg	< 0,05
IDENTITY A, B, C, D	PASS	CONFORMS
HEAVY METALS CALCULATED AS PB	MAX 5 mg/kg	CONFORMS
ARSENIC	MAX 0,1 mg/kg	CONFORMS
MERCURY	MAX 0,1 mg/kg	CONFORMS
CADMIUM	MAX 0,1 mg/kg	CONFORMS
LEAD	MAX 0,1 mg/kg	CONFORMS
NICKEL	MAX 20 mg/kg	CONFORMS
SODIUM	MAX 0,1 %	CONFORMS
POTASSIUM	MAX 0,1 %	CONFORMS
SULFATES	MAX 20 mg/kg	CONFORMS
SULPHATED ASH	MAX 0,01 %	CONFORMS
IMPURITY A (DEG)	MAX 0,1 %	CONFORMS
ANY OTHER IMPURITY RETENTION TIME LESS GLYC	MAX 0,1 %	CONFORMS
TOTAL OF ALL IMPURITIES RETENTION TIME GREATER GLYC	MAX 0,5 %	CONFORMS
BUTANETRIOLS	MAX 0,2 %	CONFORMS
ACROLEINE	MAX 3 mg/kg	CONFORMS
FATTY ACIDS AND ESTERS	MAX 0,1 %	CONFORMS

FRAGRANCE ALLERGEN DECLARATION

GLYCERINE

CAS NUMBER
56-81-5

EC NUMBER
200-289-5

FEMA NUMBER
N/A

INCI NAME
GLYCERIN

We hereby confirm that above mentioned material does not contain below allergens according to Regulation (EU) 2023/1545 amending Annex III to the Cosmetics Regulation (EC) 1223/2009:

NAME	CAS NUMBER	CONCENTRATION PRESENT
3-PROPYLIDENEPHTHALIDE	17369-59-4	
6-METHYLCOUMARIN	92-48-8	
ACETYL CEDRENE	32388-55-9	
ALPHA-AMYL CINNAMIC ALCOHOL	101-85-9	
ALPHA-AMYL CINNAMIC ALDEHYDE	122-40-7	
ALPHA-TERPINENE	99-86-5	
AMYL SALICYLATE	2050-08-0	
ANETHOLE	104-46-1/4180-23-8	
ANISYL ALCOHOL	105-13-5	
BENZYL ALCOHOL	100-51-6	
BENZYL BENZOATE	120-51-4	
BENZYL CINNAMATE	103-41-3	
BENZYL SALICYLATE	118-58-1	
BENZALDEHYDE	100-52-7	
BETA-CARYOPHYLLENE	87-44-5	
CAMPHOR	76-22-2	
CANANGA ODORATA OIL	83863-30-3/8006-81-3/68606-83-7/ 93686-30-7	
CARVONE	99-49-0/6485-40-1	
CEDRUS ATLANTICA OIL	92201-55-3/8023-85-6	
CINNAMIC ALCOHOL	104-54-1	
CINNAMIC ALDEHYDE	104-55-2	

CINNAMOMUM CASSIA LEAF OIL	8007-80-5/84961-46-6	
CINNAMOMUM ZEYLANCIUM BARK OIL	8015-91-6/84649-98-9	
CITRAL (NERAL+GERANIAL)	5392-40-5	
CITRONELLOL	106-22-9	
CITRUS AURANTIUM FLOWER OIL	72968-50-4/8028-48-6/8016-38-4	
CITRUS AURANTIUM PEEL OIL	68916-04-1/72968-50-4/97766-30-8/ 8028-48-6/8008-57-9	
CITRUS AURANTIUM BERGAMIA PEEL OIL	8007-75-8/89957-91-5/68648-33-9/ 8007-75-8/85049-21-1	
CITRUS LIMON PEEL OIL	84929-13-7/8008-56-8	
COUMARIN	91-64-5	
DIMETHYL PHENETHYL ACETATE	151-05-3	
EUCALYPTUS GLOBULUS OIL	97926-40-4/8000-48-4	
EUGENIA CARYOPHYLLUS OIL	8000-34-8/84961-50-2/8015-97-2	
EUGENOL	97-53-0	
EUGENYL ACETATE	93-28-7	
FARNESOL	4602-84-0	
GAMMA-METHYL IONONE	127-51-5	
GERANIOL	106-24-1	
GERANYL ACETATE	105-87-3	
HEXADECANOLACETONE	109-29-5	
HYDROXYCITRONELLAL	107-75-5	
HEXAMELTHYLINDANOPYRAN	1222-05-5	
HEXYL CINNAMIC ALDEHYDE	101-86-0	
ISOEUGENOL	97-54-1	
ISOEUGENYL ACETATE	93-29-8	
JASMINE OIL	84776-64-7/90045-94-6/8022-96-6/ 8024-43-9/90045-94-6	
JUNIPERUS VIRGINIANA OIL	8000-27-9/85085-41-2	
LAURUS NOBILIS LEAF OIL	8002-41-3/8007-48-5/84603-73-6	
LAVANDULA OIL	91722-69-9/84776-65-8/8000-28-0/ 90063-37-9/8022-15-9	
LEMONGRASS OIL	8007-02-1/89998-16-3/91844-92-7	
LIMONENE	138-86-3/5989-27-	

	5/5989-54-8	
LINALOOL	78-70-6	
LINALYL ACETATE	115-95-7	
LIPPIA CITRIODORA ABSOLUTE	8024-12-2/85116-63-8	
MENTHA PIPERITA OIL	8006-90-4/84082-70-2	
MENTHA VIRIDIS LEAF OIL	8008-79-5/84696-15-5	
MENTHOL	89-78-1/1490-04-6/2216-51-5	
METHYL OCTINE CARBONATE	111-12-6	
METHYL SALICYLATE	119-36-8	
MYROXYLON PEREIRAE OIL	8007-00-9	
NARCISSUS EXTRACT	90064-26-9/68917-12-4/90064-27-0/ 90064-25-8	
OAKMOSS	68917-10-2/90028-68-5	
PELARGONIUM GRAVEOLENS FLOWER OIL	90082-51-2/8000-46-2	
PINENE	80-56-8/7785-70-8/127-91-3/ 17172-67-3	
PINUS MUGO	90082-72-7	
PINUS PUMILA	97676-05-6	
POGOSTEMON CABIN OIL	8014-09-3/84238-39-1	
ROSE FLOWER OIL	8007-01-0/93334-48-6/84696-47-9/ 84604-12-6/ 84604-13-7/92347-25-6	
ROSE KETONES	43052-87-5/23726-94-5 24720-09-0 23696-85-7 57378-68-4 71048-82-3 23726-92-3 23726-91-2	
SALICYLALDEHYDE	90-02-8	
SANTALOL	11031-45-1/115-71-9/77-42-9	
SANTALUM ALBUM OIL	8006-87-9/84787-70-2	
SCLAREOL	515-03-7	
TERPINEOL	8000-41-7/98-55-5-138-87-4/586-81-2	
TETRAMETHYL ACETYLOCTAHYDRONAPHTHALENES	54464-57-2	
TREEMOSS	68648-41-9/90028-	

	67-4	
TRIMETHYLBENZENEPROPANOL	103694-68-4	
TURPENTINE	9005-90-7/8006-64-2/8052-14-0	
TERPINOLENE	586-62-9	
TRIMETHYLCYCLOPENTENYL METHYLISOPENTANOL	67801-20-1	
VANILLIN	121-33-5	

FEBRUARY 2024

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CMR CERTIFICATE

PRODUCT NAME

GLYCERINE

CAS NUMBER
56-81-5

EC NUMBER
200-289-5

FEMA NUMBER
N/A

INCI NAME
GLYCERIN

We hereby declare that we have received confirmation from the Manufacturer to state that the above material, supplied by OQEMA Ltd., does not contain any of the listed CMR products, outlined in Article 15 of the Cosmetics Regulation 1223/2009 (CMR substances of category 1A, 1B, or 2 under Part 3 of Annex IV to Regulation (EC) NO 1272/2008).

MAY 2024

FLOW CHART

GLYCERINE

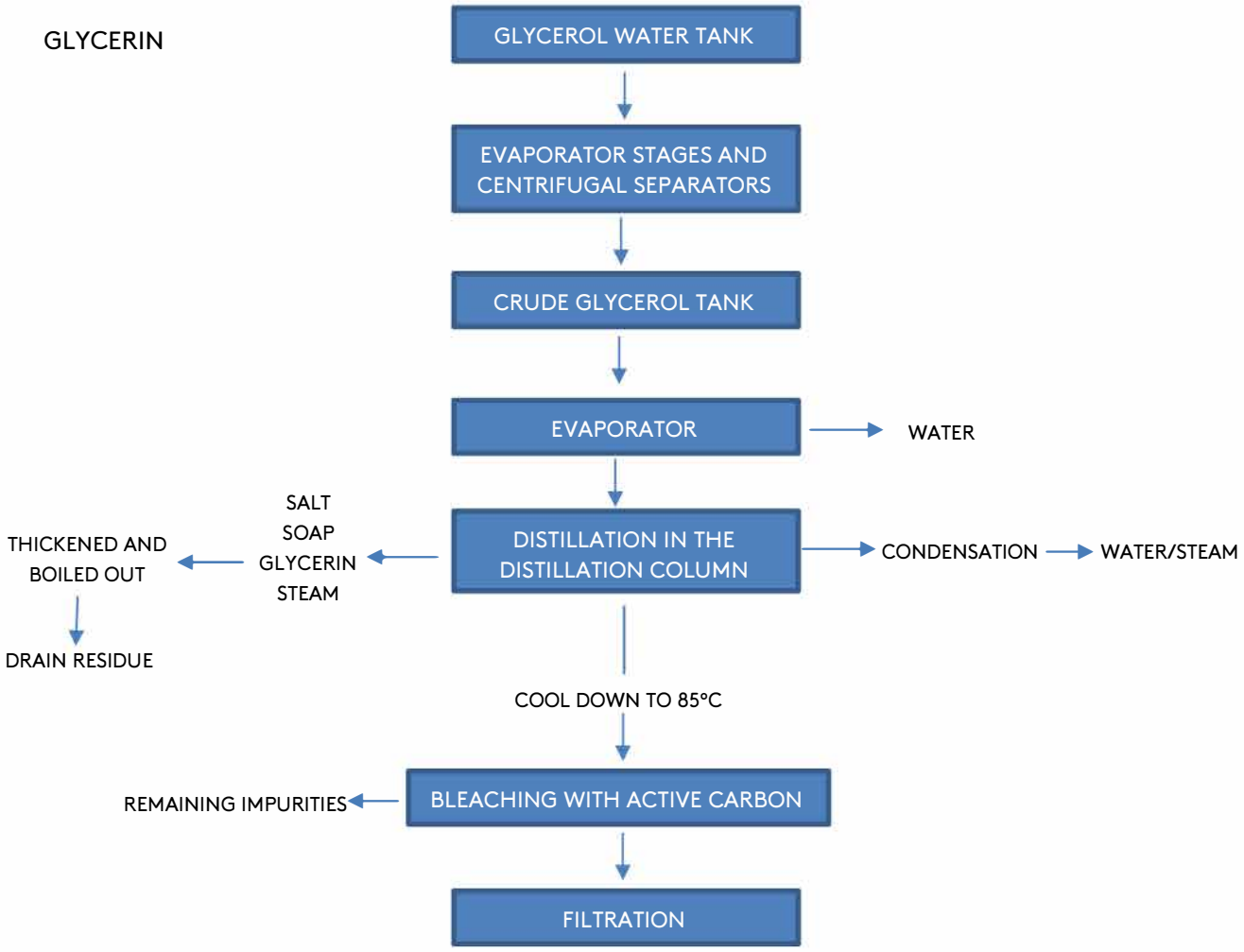
CAS NUMBER
56-81-5

EC NUMBER
200-289-5

FEMA NUMBER
N/A

INCI NAME

GLYCERIN



APRIL 2023

GMO STATEMENT

GLYCERINE

CAS NUMBER
56-81-5

EC NUMBER
200-289-5

FEMA NUMBER
N/A

INCI NAME
GLYCERIN

We hereby confirm that, to the best of our knowledge, no Genetically Modified Organisms (GMO's) are used in the Production of the above material.

OCTOBER 2022

SAFETY DATA SHEET
GLYCERINE

This SDS is not mandated under REACH Regulation (EC) No 1907/2006 and is provided for information only. This SDS is not mandated under the REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577 and is provided for information only.

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

1.1. Product identifier

Product name GLYCERINE

Chemical name PROPANE-1,2,3-TRIOL

EU REACH registration notes The material is Glycerol/Glycerine is listed in Annex V (paragraph 9) of REACH and is therefore exempt from registration.

CAS number 56-81-5

EC number 200-289-5

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

Identified uses Chemical synthesis Plasticiser Dyestuffs. Cosmetics.

1.3. Details of the supplier of the safety data sheet

Supplier

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

technical@madarcorporation.co.uk

01425 655 555

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)

Physical hazards Not Classified

GLYCERINE

Health hazards Not Classified

Environmental hazards Not Classified

2.2. Label elements

EC number 200-289-5

Hazard statements NC Not Classified

Contains GLYCEROL

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

GLYCEROL **99.5%**

CAS number: 56-81-5 EC number: 200-289-5

Classification
Not Classified

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Ensure that medical personnel are aware of the materials involved and take precautions to protect themselves. In all cases of doubt, or when symptoms persist, seek medical attention.

Inhalation Remove person to fresh air and keep comfortable for breathing. Get medical attention.

Ingestion Rinse mouth. Do not induce vomiting unless under the direction of medical personnel. Get medical attention.

Skin contact Wash skin thoroughly with soap and water.

Eye contact Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

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

General information No information available.

Inhalation No information available.

Ingestion Ingestion of large quantities may cause: Headache. Dizziness. Nausea, vomiting. Diarrhoea.

Skin contact Causes mild skin irritation.

Eye contact Irritation of eyes and mucous membranes.

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

Specific treatments No information available.

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

GLYCERINE

Suitable extinguishing media Water spray, fog or mist. Dry chemicals. Carbon dioxide (CO2). Foam.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Hazardous combustion products Carbon monoxide (CO). Carbon dioxide (CO2). Pyrolysis products. Toxic gases or vapours. Irritating gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Keep people away. Isolate fire and deny unnecessary entry. Dilute burning liquid with large amounts of water. In case of fire and/or explosion do not breathe fumes. Extinguishing materials should be selected according to the surrounding area Prevent run-off from the fire fighting to enter drains or water courses. Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. EN133 If protective equipment is not available or not used, fight fire from a protected location or safe distance.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. Ventilate spillage area Special danger of slipping by leaking/ spilling product. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Keep unnecessary and unprotected personnel away from the spillage.

For non-emergency personnel No information available.

For emergency responders Use self-contained breathing apparatus.

6.2. Environmental precautions

Environmental precautions Do not allow product to reach soil, waterways, drains and sewers. Retain contaminated washing water and dispose

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb spilled liquid with inert absorbent. Collect spillage. Place in suitable containers for disposal, labelled appropriately. Ventilate area and exercise caution

6.4. Reference to other sections

Reference to other sections See Section 7 for information on safe handling. For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Container must be kept tightly closed when not in use.

Advice on general occupational hygiene Avoid contact with eyes and skin. Do not eat, drink or smoke when using this product. Eye wash facilities and emergency shower must be available when handling this product. Good personal hygiene procedures should be implemented. Wash skin thoroughly after handling. Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

GLYCERINE

Storage precautions Store in tightly-closed, original container in a dry and cool place. Protect from moisture. Protect from humidity: Keep container tightly closed and dry. Keep away from heat. General ventilation required.

Storage class No information available.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

Usage description No information available.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

No information available.

GLYCEROL

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³
WEL = Workplace Exposure Limit.

Ingredient comments No information available.

Biological limit values No information available.

DNEL Workers - Inhalation; Long term local effects: 56 mg/m³
General population - Inhalation; Long term local effects: 33 mg/m³
General population - Oral; Long term systemic effects: 229 mg/kg/day

DMEL No information available.

PNEC Fresh water; 0.885 mg/l
marine water; 0.088 mg/l
STP; 1000 mg/l
Sediment (Freshwater); 3.3 mg/kg
Sediment (Marinewater); 0.33 mg/kg
Soil; 0.141 mg/kg

8.2. Exposure controls

Protective equipment

Appropriate engineering controls As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist. Emergency shower and eye wash facilities should be readily available Use approved respirator if air contamination is above an acceptable level.

Personal protection No information available.

Eye/face protection Personal protective equipment that provides appropriate eye and face protection should be worn. Safety glasses with side shields conforming to EN166

GLYCERINE

Hand protection	To protect hands from chemicals, wear gloves that are proven to be impervious to the chemical and resist degradation. Wash contaminated gloves before reuse. It is recommended that gloves are made of the following material: Butyl rubber. Polyethylene. Neoprene. Natural rubber Polyvinyl chloride (PVC). Nitrile rubber. Polyvinyl alcohol (PVA). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. Thickness > or = 0,2mm.
Other skin and body protection	Body protection must be chosen depending on activity and possible exposure, eg. apron, protecting boots, chemical-protection suit (according to DIN-EN 465). Chemical resistant boots should comply with European standard EN345.
Hygiene measures	Avoid contact with skin, eyes and clothing Do not eat, drink or smoke when using this product. Eye wash facilities and emergency shower must be available when handling this product. Good personal hygiene procedures should be implemented. Wash skin thoroughly after handling. Take off immediately all contaminated clothing and wash it before reuse. Keep away from foodstuffs, beverages and feed.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. type AP2
Thermal hazards	Contact with hot product can cause serious thermal burns. Wear appropriate thermal protective clothing, when necessary.
Environmental exposure controls	Avoid discharge into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Semi-viscous liquid.
Colour	Colourless.
Odour	Odourless.
Odour threshold	No information available.
pH	pH (concentrated solution): 5-9 20 °C
Melting point	18.17°C klimisch rating 2 1953 1925
Initial boiling point and range	290°C @ 760 mm Hg klimisch rating 2 1953 1924
Flash point	177 - 199°C Closed cup. klimisch rating 2 1994 2002
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	Not flammable.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	0.195 mm Hg @ 100°C klimisch rating 2 1953
Vapour density	No information available.
Relative density	1.261 @ 20°C klimisch rating 2 1953
Bulk density	No information available.

GLYCERINE

Solubility(ies)	1000000 mg/l water @ 25°C klimisch rating 2 1997 1986
Partition coefficient	log Pow: -1.75 klimisch rating 2 1980 1971 1995 OECD guideline 107
Auto-ignition temperature	370°C klimisch rating 2 2002
Decomposition Temperature	No information available.
Viscosity	1 412 mPa s @ 20°C klimisch rating 2 1953 OECD 114 1,300 - 1,412 mPa s @ 20°C Dynamic viscosity.
Explosive properties	No information available.
Explosive under the influence of a flame	No information available.
Oxidising properties	No information available.
Comments	No information available.

9.2. Other information

Other information	No information available.
Refractive index	No information available.
Particle size	No information available.
Molecular weight	No information available.
Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Stable under normal conditions

10.2. Chemical stability

Stability The substance is hygroscopic and will absorb water by contact with the moisture in the air.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions In use may form flammable/explosive vapour-air mixture.

10.4. Conditions to avoid

Conditions to avoid Keep away from heat, sparks and open flame. Avoid heat, flames and other sources of ignition. Water, moisture. No smoking.

10.5. Incompatible materials

Materials to avoid Avoid contact with strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products At high temperatures acrolein may be formed. In the event of a fire, see section 5

SECTION 11: Toxicological information

11.1. Information on toxicological effects

GLYCERINE

Toxicological effects	No information available.
Other health effects	No information available.
Acute toxicity - oral	
Notes (oral LD_{50})	LD_{50} 27 mg/kg, bw, Oral, Rat Klimisch rating 1 LD_{50} ca. 23 000 mg/kg, bw, Oral, Mouse 1953 Klimisch rating 2 1953 LD_{50} >= 10 000 mg/kg, bw, Oral, Guinea pig Klimisch rating 2 1953
Acute toxicity - dermal	
Notes (dermal LD_{50})	LD_{50} 45 ml/kg, bw, Dermal, Guinea pig Klimisch rating 2 1938
Acute toxicity - inhalation	
Notes (inhalation LC_{50})	LC50 4 655 mg-min/liter, Inhalation, Rat klimisch rating 2 1967
Skin corrosion/irritation	
Skin corrosion/irritation	Not irritating.
Animal data	Dose: 0.5 ml, 24 hours, Rabbit Klimisch rating 2 1971 Not irritating.
Human skin model test	No information available.
Extreme pH	No information available.
Serious eye damage/irritation	
Serious eye damage/irritation	Dose: 0.1 ml, 7 days, Rabbit klimisch rating 2 1971 Not irritating. Dose: 0.1 ml, 1 hour, Rabbit klimisch rating 2 1953 Not irritating.
Respiratory sensitisation	
Respiratory sensitisation	No information available.
Skin sensitisation	
Skin sensitisation	No information available.
Germ cell mutagenicity	
Genotoxicity - in vitro	Bacterial reverse mutation test: Negative. Klimisch rating 2 1983 Bacterial reverse mutation test: Negative. Klimisch rating 2 1988 OECD471 Mammalian cell micronucleus test: Negative. Klimisch rating 2 1988 OECD476 Sister chromatid exchange assay in mammalian cells: Negative. Klimisch rating 2 1988 OECD476 DNA damage and/or repair: Negative. Klimisch rating 2 1988 OECD 482 Chromosome aberration: Negative. Klimisch rating 2 1988 OECD473 Bacterial reverse mutation test: Negative. Klimisch rating 2 1983
Genotoxicity - in vivo	No information available.
Carcinogenicity	
Carcinogenicity	No information available.
Target organ for carcinogenicity	No information available.
IARC carcinogenicity	No information available.
NTP carcinogenicity	No information available.
Reproductive toxicity	
Reproductive toxicity - fertility	No information available.
Reproductive toxicity - development	Maternal toxicity: - NOAEL: 1310 mg/kg/day, Oral, Rat Developmental toxicity: - NOAEL: 1310 mg/kg/day, Oral, Rat Klimisch rating 2 1974 Maternal toxicity: - NOAEL: 1280 mg/kg/day, Oral, Mouse Developmental toxicity: - NOAEL: 1280 mg/kg/day, Oral, Mouse Klimisch rating 2 1974 Maternal toxicity: - NOAEL: 1180 mg/kg/day, Oral, Rabbit Developmental toxicity: - NOAEL: 1180 mg/kg/day, Oral, Rabbit Klimisch rating 2 1974

GLYCERINE

Specific target organ toxicity - single exposure

STOT - single exposure	No information available.
Target organs	No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	NOAEL 8000-10,000 mg/kg, bw, Oral, Rat Klimisch rating 2 1953 OECD 452 NOEL 50 000 ppm, Oral, Rat LOEL 200 000 ppm, Oral, Rat Klimisch rating 2 1962 NOAEL 167 mg/m³, Inhalation, Rat Klimisch rating 2 1992 NOEL 4 ml/kg, Dermal, Rabbit Klimisch rating 2 1953
Target organs	No information available.

Aspiration hazard

Aspiration hazard	No information available.

Toxicokinetics	No information available.
General information	No information available.
Inhalation	Spray/mists may cause respiratory tract irritation.
Ingestion	May cause discomfort if swallowed.
Skin contact	Prolonged skin contact may cause temporary irritation.
Eye contact	May cause discomfort.
Acute and chronic health hazards	No information available.
Route of exposure	No information available.
Target organs	No information available.
Medical symptoms	No information available.
Medical considerations	No information available.

SECTION 12: Ecological information

Ecotoxicity No information available.

12.1. Toxicity

Toxicity No information available.

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 54000 mg/l, Oncorhynchus mykiss (Rainbow trout) klimisch rating 2 1980
Acute toxicity - aquatic invertebrates	Weight of evidence EC_{50}, 24 hours: > 10000 mg/l, Daphnia magna klimisch rating 2 1982
Acute toxicity - aquatic plants	EC3, 8 days: > 10000 mg/l, Scenedesmus subspicatus klimisch rating 2 1978 1980
Acute toxicity - microorganisms	No information available.

GLYCERINE

Acute toxicity - terrestrial	No information available.

Chronic aquatic toxicity

Chronic toxicity - fish early life stage	No information available.
Short term toxicity - embryo and sac fry stages	No information available.
Chronic toxicity - aquatic invertebrates	No information available.
Toxicity to soil	No information available.
Toxicity to terrestrial plants	No information available.

12.2. Persistence and degradability

Persistence and degradability	No information available.
Phototransformation	No information available.
Stability (hydrolysis)	No information available.
Biodegradation	Water - Degradation 60: 2 hours Water - Degradation 86: 4 hours Water - Degradation 94: 24 hours klimisch rating 2 1975
Biological oxygen demand	No information available.
Chemical oxygen demand	No information available.

12.3. Bioaccumulative potential

Bioaccumulative potential	No information available.
Partition coefficient	log Pow: -1.75 klimisch rating 2 1980 1971 1995 OECD guideline 107

12.4. Mobility in soil

Mobility	No information available.
Adsorption/desorption coefficient	No information available.
Henry's law constant	QSAR 0 atm m^3/mol @ 25°C klimisch rating 2
Surface tension	No information available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current UK criteria.

12.6. Other adverse effects

Other adverse effects	No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Disposal should be in accordance with applicable regional, national and local laws and regulations.

GLYCERINE

Disposal methods	Do not empty into drains. Avoid the spillage or runoff entering drains, sewers or watercourses. Empty/contaminated containers may contain product residues so should be disposed of in the same way as the product.
Waste class	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

SECTION 14: Transport information

General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

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

National regulations	EH40/2005 Workplace exposure limits. The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 (SI 2020 No. 1577) (as amended).
EU legislation	Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended) Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended)'
Guidance	No information available.
Health and environmental listings	No information available.
Authorisations (SI 2020 No. 1577 Annex XIV)	No information available.

GLYCERINE

Restrictions (SI 2020 No. 1577 Annex XVII) No information available.

15.2. Chemical safety assessment

No information available.

Inventories

EU - EINECS/ELINCS
No information available.

Canada - DSL/NDSL
No information available.

US - TSCA
No information available.

US - TSCA 12(b) Export Notification
No information available.

Australia - AIIC
No information available.

Japan - ENCS
No information available.

Korea - KECI
No information available.

China - IECSC
No information available.

Philippines – PICCS
No information available.

New Zealand - NZIOC
No information available.

Taiwan - TCSI
No information available.

South Korea

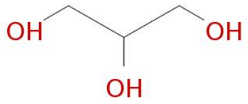
SECTION 16: Other information

GLYCERINE

Abbreviations and acronyms used in the safety data sheet	CAS: Chemical Abstracts Service. DNEL: Derived No Effect Level. C&L: Classification and Labelling GHS: Globally Harmonized System. CLP: Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 LC50: Lethal Concentration to 50 % of a test population. LD50: Lethal Dose to 50% of a test population (Median Lethal Dose). PBT: Persistent, Bioaccumulative and Toxic substance. PNEC: Predicted No Effect Concentration. REACH: The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020 No. 1577. SVHC: Substances of Very High Concern. vPvB: Very Persistent and Very Bioaccumulative. EC_{50}: 50% of maximal Effective Concentration. LOAEC: Lowest Observed Adverse Effect Concentration. LOAEL: Lowest Observed Adverse Effect Level. NOAEC: No Observed Adverse Effect Concentration. NOEC: No Observed Effect Concentration. LOEC: Lowest Observed Effect Concentration. DMEL: Derived Minimal Effect Level. SDS: Safety Data Sheet MSDS: Material Safety Data Sheet OECD: Organization for Economic Co-operation and Development QSAR: Qualitative Structure Activity Relationship PPE: Personal Protection Equipment SCBA: Self-Contained Breathing Apparatus STOT: Specific Target Organ Toxicity STOT (RE): Repeated Exposure STOT (SE): Single Exposure
General information	No information available.
Key literature references and sources for data	Source: European Chemicals Agency, http://echa.europa.eu/ Material Safety Data Sheet, Misc. manufacturers.
Classification procedures according to SI 2019 No. 720	No information available.
Training advice	No information available.
Revision comments	General update.
Issued by	Technical Department.
Revision date	12/10/2022
Revision	001
Supersedes date	16/01/2019
SDS number	22324

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

PRODUCT SPECIFICATION GLYCERINE



CAS No: 56-81-5
EC No: 200-289-5
Rev: 001
Date: 17/10/2022
INCI NAME: GLYCERIN

CHARACTERISTIC	SPECIFICATION
APPEARANCE	COLOURLESS SEMI-VISCOUS LIQUID
ODOUR	ODOURLESS
GLYCEROL CONTENT (%)	99.5 – 100.0
SPECIFIC GRAVITY AT 20°C	1.260 – 1.300
ALKA/ACIDITY (NA20) (%)	0.0000 – 0.0025
SULPHATED ASH (%)	0.00 – 0.01
COLOUR – HAZEN	1 - 10
MOISTURE (%)	0.0 – 0.5

*This material conforms to European and British Pharmacopeia

APPLICATIONS:

Glycerine is used in personal care applications such as cosmetics, dyestuffs and pharma applications.

PACKAGING AND STORAGE:

Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep away from heat, sparks and open flame. For more information, please see section 7 of the MSDS.

VEGAN SUITABILITY STATEMENT

GLYCERINE

CAS NUMBER
56-81-5

EC NUMBER
200-289-5

FEMA NUMBER
N/A

INCI NAME
GLYCERIN

We hereby confirm that, to the best of our knowledge, the whole production process of the above material, and the end product, is not processed with any animal products, and is suitable for a vegetarian and vegan use.

OCTOBER 2022