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# SAFETY DATA SHEET

**Product Code: GLYCER**



## SECTION 1 PRODUCT IDENTIFICATION

**Product Identifier**

**Product Name:** Glycerine or Glycerol

**Other means of Identification:** Not Available

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

**Relevant Identified Uses:** As solvent, humectant, plasticiser, emollient, sweetener; in the manufacture of nitroglycerol (explosive), cosmetics, liquid soaps, liqueurs, confectioneries, blacking, printing and copying inks and lubricants. It is also used in the manufacture of elastic glues, lead oxide cements; to keep fabrics pliable; to preserve printing on cotton; for printing rollers; to keep frost from windshields; as antifreeze in automobiles, gas meters and hydraulic jacks, in shock absorber fluids. In fermentation nutrients in production of antibiotics.

## SECTION 2 HAZARD IDENTIFICATION

**Classification of the substance or mixture**

**NON-HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.**

**CHEMWATCH HAZARD RATINGS**

| | Min | Max |
|---|---|---|
| Flammability | 1 | |
| Toxicity | 0 | |
| Body Contact | 0 | |
| Reactivity | 1 | |
| Chronic | 0 | |

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

**Poinsons Schedule** Not Applicable

**LABEL ELEMENTS**

**GHS label elements:** Not Applicable

**Signal Word:** Not Applicable

**Hazard statement(s):** Not Applicable

**PRECAUTIONARY STATEMENT(S)**

**Prevention:** Not Applicable

**Response:** Not Applicable

**Storage:** Not Applicable

**Disposal:** Not Applicable

## SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

**Substances**

See section below for composition of Mixtures

**Mixtures**

| CAS No. | %[weight] | Name |
|---|---|---|
| 56-81-5 | >96 | Glycerol |

## SECTION 4 FIRST AID MEASURES

**Description of First Aid Measures**

**Eye Contact:**

If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

**Skin Contact:**

If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

**Inhalation:**

- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor, without delay.

**Ingestion:**

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

**Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

## SECTION 5 FIRE FIGHTING MEASURES

**Extinguishing Media**

- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

**Special hazards arising from the substrate or mixture**

**Fire Incompatibility:**

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

**Advice for Fire Fighters**

**Fire Fighting:**

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- Avoid spraying water onto liquid pools.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.

**Fire/Explosion Hazard:**

- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).
- May emit acrid smoke.
- Mists containing combustible materials may be explosive

,
Combustion products include:
Carbon Dioxide ($CO_2$)
Acrolein
,
other pyrolysis products typical of burning organic material.
May emit poisonous fumes.
May emit corrosive fumes.

**HAZCHEM:** Not Applicable

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

See section 8

**Environmental precautions**

See section 12

**Methods and material for containment and cleaning up**

**Minor Spills:**

Slippery when spilt.

- Remove all ignition sources
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up.
- Place in a suitable, labelled container for waste disposal.

**Major Spills:**

Slippery when spilt.
Moderate hazard.
- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- No smoking, naked lights or ignition sources.
- Increase ventilation.
- Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.
- If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

**Precautions for Safe Handling**

**Safe Handling:**

- DO NOT allow clothing wet with material to stay in contact with skin
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this SDS.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.

**Other Information:**

- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storage and handling recommendations contained within this SDS.

**Conditions for safe storage, including any incompatibilities**

**Suitable Container:**

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

**Storage Incompatibility:**

Glycerol:
- Reacts violently with strong oxidisers, acetic anhydride, alkali metal hydrides, calcium hypochlorite, calcium oxychloride, chlorine, chromic anhydride, chromium oxides, ethylene oxide, hydrogen peroxide, phosphorous triiodide, potassium chlorate, potassium permanganate, potassium peroxide, silver perchlorate, sodium hydride, sodium peroxide, sodium triiodide, sodium tetrahydroborate,is incompatible with strong acids, caustics, aliphatic amines, isocyanates, uranium fluoride
- Is able to polymerise above 145˚C
- Avoid reaction with oxidising agents

## SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

### CONTROL PARAMETERS

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|---|---|---|---|---|---|---|
| Australia Exposure Standards | Glycerol | Glycerin mist | 10 mg/m³ | Not Available | Not Available | Not Available |

EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|---|---|---|---|---|
| Glycerol | Glycerine (mist); (Glycerol; Glycerin) | 45 mg/m³ | 860 mg/m³ | 2,500 mg/m³ |

| Ingredient | Original IDLH | Revised IDLH |
|---|---|---|
| Glycerol | Not Available | Not Available |

### Exposure Controls

**Appropriate Engineering Controls:**

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
The basic types of engineering controls are:
Process controls which involve changing the way a job activity or process is done to reduce the risk.
Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.
Employers may need to use multiple types of controls to prevent employee overexposure.

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances. If risk of overexposure exists, wear approved respirator. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection. Provide adequate ventilation in warehouses and enclosed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

| Type of Contaminant: | Air Speed: |
|---|---|
| Solvent, vapours, degreasing etc., evaporating from tank (in still air). | 0.25-0.5 m/s (50-100 f/min) |
| Aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation) | 0.5-1 m/s (100-200 f/min.) |

| | |
|---|---|
| Direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) | 1-2.5 m/s (200-500 f/min.) |
| grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion) | 2.5-10 m/s (500-2000 f/min.) |

Within each range the appropriate value depends on:

| Lower end of the range | Upper end of the range |
|---|---|
| 1: Room air currents minimal or favourable to capture | 1: Disturbing room air currents |
| 2: Contaminants of low toxicity or of nuisance value only. | 2: Contaminants of high toxicity |
| 3: Intermittent, low production. | 3: High production, heavy use |
| 4: Large hood or large air mass in motion | 4: Small hood-local control only |

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

**Personal Protection:**

PPE Gloves | PPE Goggles | PPE Mask | PPE Lab Coat

**Eye and Face Protection:**

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

**Skin Protection:**

See Hand protection below

**Hands/Feet Protection:**

- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.
- Contaminated gloves should be replaced.

For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.
It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.
Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.
Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is
recommended.

**Body protection:** See Other protection below

**Other protection:**

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

**Thermal hazards:** Not Available

**Recommended Material(s)**

**GLOVE SELECTION INDEX**

Glove selection is based on a modified presentation of the:
"Forsberg Clothing Performance Index".
The effect(s) of the following substance(s) are taken into account in the computergenerated selection:
PALMERA G995B (GLYCERINE BP)

| Material | CPI |
|---|---|
| NATURAL RUBBER | A |
| NATURAL+NEOPRENE | A |
| NITRILE | A |

* CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

**Respiratory Protection**

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.
Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|---|---|---|---|
| up to 10 x ES | A-AUS P2 | - | A-PAPR-AUS / Class 1 P2 |
| up to 50 x ES | - | A-AUS / Class 1 P2 | - |
| up to 100 x ES | - | A-2 P2 | A-PAPR-2 P2^ |

^ - Full-face
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65˚C)

Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.

## SECTION 9 PHYSICAL/CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

**Appearance:** Oily, colourless, odourless liquid, with syrupy, sweet taste. Miscible with water and alcohol. Insoluble in benzene, ether, chloroform, fixed and volatile oils. Absorbs water from the air. Also absorbs hydrogen sulfide, hydrogen cyanide and sulfur dioxide.

| | | | |
|---|---|---|---|
| **Physical state:** | Liquid | **Relative Density (Water = 1):** | 1.2-1.3 @ 20 C |
| **Odour:** | Not Available | **Partition Coefficient N-Octanol / Water:** | Not Available |
| **Odour Threshold:** | Not Available | **Auto-Ignition Temperature (°C):** | 370 |
| **pH (as supplied):** | Not Applicable | **Decomposition Temperature:** | 280 |
| **Melting Point/Freezing Point (˚C):** | 18 | **Viscosity (cSt):** | Not Available |

| | | | |
|---|---|---|---|
| **Initial Boiling Point and Boiling Range (˚C):** | 290 | **Molecular Weight (g/mol):** | 92.1 |
| **Flash Point (˚C):** | 160 | **Taste:** | Not Available |
| **Evaporation Rate:** | Non volatile | **Explosive Properties:** | Not Available |
| **Flammability:** | Not Available | **Oxidising Property:** | Not Available |
| **Upper Explosive Limit (%):** | 19 | **Surface Tension (dyn/cm or mN/m):** | Not Available |
| **Lower Explosive Limit (%):** | 3 | **Volatile Component (%vol):** | Nil @ 38 C |
| **Vapour Pressure (kPa):** | 0.003 @ 50 C | **Gas Group:** | Not Available |
| **Solubility in Water:** | Miscible | **pH as a Solution (1%):** | 7 approx. |
| **Vapour Density (Air=1):** | 3.17 | **VOC g/L:** | Not Available |

## SECTION 10 STABILITY AND REACTIVITY

| | |
|---|---|
| **Reactivity:** | See section 7 |
| **Chemical Stability:** | • Unstable in the presence of incompatible materials<br>• Product is considered stable<br>• Hazardous polymerisation will not occur |
| **Possibility of Hazardous Reaction:** | See section 7 |
| **Conditions to Avoid:** | See section 7 |
| **Incompatible Materials:** | See section 7 |
| **Hazardous Decomposition Products:** | See section 5 |

## SECTION 11 TOXICOLOGICAL INFORMATION

**Information on Toxicological Effects**

| | |
|---|---|
| **Inhaled:** | Not normally a hazard due to non-volatile nature of product<br>The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. |
| **Ingestion:** | Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where p re-existing organ (e.g. liver, kidney) damage is evident.<br>IIngestion of large quantities may cause nausea, diarrhoea and vomiting. Biokinetic studies indicate that a 70 kg adult should be able to metabolise and excrete over 2 grams of glycerol in an 8-hour workday. |
| **Skin Contact:** | The material may accentuate any pre-existing dermatitis condition<br>Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.<br>Open cuts, abraded or irritated skin should not be exposed to this material<br>Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. |

**Eye:** Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

**Chronic:** Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

**PALMERA G995B (GLYCERINE BP):**

| TOXICITY | IRRITATION |
|---|---|
| Intraperitoneal (Mouse) LD50: 8700 mg/kg[2] | Not Available |
| Intraperitoneal (Rat) LD50: 4420 mg/kg[2] | |
| Intravenous (Mouse) LD50: 4250 mg/kg[2] | |
| Intravenous (Rat) LD50: 5566 mg/kg[2] | |
| Oral (Guinea pig) LD50: 7750 mg/kg[2] | |
| Oral (Mouse) LD50: 4090 mg/kg[2] | |
| Oral (Rat) LD50: 12600 mg/kg[2] | |
| Subcutaneous (Mouse) LD50: 91 mg/kg[2] | |
| Subcutaneous (Rat) LD50: 100 mg/kg[2] | |

**Glycerol:**

| TOXICITY | IRRITATION |
|---|---|
| Dermal (guinea pig) LD50: 54000 mg/kg[1] | Not Available |
| Oral (rat) LD50: >20-<39800 mg/kg[1] | |

***Legend:*** *1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*

**PALMERA G995B:**
**(GLYCERINE BP) & GLYCEROL:** Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

**PALMERA G995B (GLYCERINE BP) & GLYCEROL:** At very high concentrations, evidence predicts that glycerol may cause tremor, irritation of the skin, eyes, digestive tract and airway. Otherwise it is of low toxicity. There is no significant evidence to suggest that it causes cancer, genetic, reproductive or developmental toxicity.

| | | | |
|---|---|---|---|
| **Acute Toxicity:** | ✗ | **Carcinogenicity:** | |
| **Skin Irritation/Corrosion:** | | **Reproductivity:** | |
| **Serious Eye Damage/Irritation:** | | **STOT - Single Exposure:** | |
| **Respiratory or Skin Sensitisation:** | | **STOT - Repeated Exposure:** | |
| **Mutagenicity:** | | **Aspiration Hazard:** | |

*Legend:* ✗ *– Data available but does not fill the criteria for classification*
✓ *– Data available to make classification*
*– Data Not Available to make classification*

## SECTION 12 ECOLOGICAL INFORMATION

**Toxicity**

| Ingredient | Endpoint | Test Duration (hr) | Species | Value | Source |
|---|---|---|---|---|---|
| Glycerol | LC50 | 96 | Fish | >11mg/L | 2 |
| Glycerol | EC50 | 96 | Algae or other aquatic plants | 77712.039mg/L | 3 |
| Glycerol | EC20 | 24 | Crustacea | >500mg/L | 1 |
| *Legend:* | *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12- Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data* | | | | |

For Glycerol: Log Kow: -2.66 to -2.47, Atmospheric Fate: Glycerol is broken down in the air by hydroxyl radicals the half-life for this process is 6.8 hours. However, only a negligible amount of the substance will move to the atmospheric compartment. Terrestrial Fate: Only a negligible amount of glycerol will move into the soil compartment, if released into the environment. Aquatic Fate: Glycerol is considered to be readily biodegradable in the aquatic environment. Pre-adapted microorganisms can break glycerol down rapidly in oxygenated/low oxygen waters. The substance is not expected to react with water. When released to water, 100% of the substance will remain in the water compartment - only negligible amounts will be distributed to sediment.
DO NOT discharge into sewer or waterways.

**Persistence and Degradability**

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|---|---|---|
| Glycerol | LOW | LOW |

**Bioaccumulative Potential**

| Ingredient | Bioaccumulation |
|---|---|
| Glycerol | LOW (LogKOW = -1.76) |

**Mobility in Soil**

| Ingredient | Mobility |
|---|---|
| Glycerol | HIGH (KOC = 1) |

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# SAFETY DATA SHEET

**Product Code: GLYCER**



## SECTION 13 DISPOSAL CONSIDERATIONS

**Waste Treatment Methods**
**Product/Packaging Disposal:**

## SECTION 14 TRANSPORT INFORMATION

**Label Required**
**Marine Pollutant:** NO
**HAZCHEM:** No Applicable

**Land transport (ADG):** NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
**Air transport (ICAO-IATA/DGR):** NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
**Sea transport (IMDG-Code / GGV See):** NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

**Transport in bulk according to Anex II of MARPOL and the IBC code**

| Source | Product Name | Pollution Category | Ship Type |
|---|---|---|---|
| IMO MARPOL (Anex II - List of Noxious Liquid Substances Carried in Bulk | Glycerine | Z | Not Applicable |

## SECTION 15 REGULATORY INFORMATION

**Safety, health and environmental regulations / legislation specific for the substance or mixture**
**GLYCEROL(56-81-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

**Australia Exposure Standards** | Australia Inventory of Chemical Substances (AICS)

| **National Inventory** | |
|---|---|
| Australia - AICS | Y |
| Canada - DSL | Y |
| Canada - NDSL | N (Glycerol) |
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | Y |
| Japan - ENCS | Y |
| Korea - KECI | Y |
| New Zealand - NZIoC | Y |
| Philippines - PICCS | Y |
| USA - TSCA | Y |
| *Legend:* | *Y = All ingredients are on the inventory*<br>*N = Not determine or one or more ingredients are not on the inventory and are not exempted from listing (see specific ingredients in brackets)* |

**Issue Date:** 20/05/2021
**Last Revision Date:** 17/08/2023
**Superseded Date:** 20/05/2021
**Version Number:** 02

# SAFETY DATA SHEET

**Product Code: GLYCER**



## SECTION 16 OTHER INFORMATION

**Other Information:**

**Ingredients with multiple CAS number**

| Name | CAS No. |
|---|---|
| Glycerol | 56-81-5, 29796-42-7, 30049-52-6, 37228-54-9, 75398-78-6, 78630-16-7, 8013-25-0 |

**Definitions and abbreviations**

PC-TWA: Permissible Concentration-Time Weighted Average
PC-STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit,
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index

**Reason for Revision:** To bring to date

# END OF SDS