Glycerine

1. Identification

GHS Product Identifier: GLYCERINE
Company Name: CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)
Address: 38 - 50 Bedford Street GILLMAN
SA 5013  Australia
Telephone/Fax Number: Tel: (08) 8440-2000, Fax: (08) 8440-2001
Recommended use of the chemical and restrictions on use:
- Alkyd resins, dynamite, ester gums, pharmaceuticals, perfumery, plasticiser for regenerated cellulose,
- cosmetics, foodstuffs, sweetener, liqueurs, confectionery, conditioning tobacco, liquors, solvent, printer's
- ink rolls, polyurethane polyols, manufacture of nitroglycerine (dynamite), elastic glues, emulsifying agent,
- rubber stamp and copying inks, binder for cements and mixes, special soaps, lubricant and softener,
- bacteriostat, penetrant, hydraulic fluid, shock absorber fluid, humectant, fermentation nutrients,
- antifreeze mixtures and laboratory reagent.

Other Information:
- Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user
  must ascertain the suitability of the product before use or application intended purpose. Preliminary
  testing of the product before use or application is recommended. Any reliance or purported reliance
  upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability
  of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by
  any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded.
- This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices
  Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods
  or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture: Classified as non-Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.
- Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical Characterization Ingredients</th>
<th>Name</th>
<th>CAS</th>
<th>Proportion</th>
<th>Hazard Symbol</th>
<th>Risk Phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Glycerol</td>
<td>56-81-5</td>
<td>100 %</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. First-aid measures

Inhalation: If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Ingestion: Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. Give water to drink. DO NOT INDUCE VOMITING. Seek medical advice if symptoms persist.

Skin: Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes.

Eye contact: Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.

First Aid Facilities: Maintain eyewash fountain in work area.

Advice to Doctor: Treat symptomatically based on judgement of doctor and individual reactions of the patient.

Other Information: For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.
5. Fire-fighting measures

Suitable extinguishing media: No limitations to the type of extinguishing media.

Hazard from Combustion Products: Oxides of carbon.

Specific Methods:
- Small fire: Use dry chemical, CO2, water spray or alcohol-resistant foam.
- Large fire: Use water spray, fog or foam.

Specific hazards arising from the chemical:
- May burn but do not ignite readily. Containers may explode when heated. Runoff may pollute waterways.
- Fire may produce irritating, poisonous and/or corrosive gases.

Precautions in connection with Fire:
- Wear SCBA and structural firefighter's uniform.

6. Accidental release measures

Personal Precautions:
- Avoid inhalation, contact with skin, eyes and clothing.
- Wear protective clothing specified for normal operations (see Section 8).

Clean-up Methods - Small Spillages:
- Absorb or contain liquid with sand, earth or spill control material. Shovel up using non-sparking tools and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled drum or overdrum.

Environmental Precautions:
- Prevent further leakage or spillage and prevent from entering drains.

7. Handling and storage

Precautions for Safe Handling:
- Avoid skin and eye contact. Avoid generating and inhaling mist. Use in ventilated areas.
- Store in cool place and out of direct sunlight. Store away from sources of heat or ignition. Keep containers closed at all times. Keep in a well-ventilated place.

Conditions for safe storage, including any incompatibilities:
- Classified as a C2 (Combustible liquid) for the purpose of storage and handling.
- Refer Australian Standard AS 1940 - 2017 'The storage and handling of flammable and combustible liquids'.

8. Exposure controls/personal protection

**Occupational exposure limit values**

<table>
<thead>
<tr>
<th>Substance</th>
<th>STEL</th>
<th>TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>10 mg/m³</td>
<td>10 ppm</td>
</tr>
</tbody>
</table>

Other Exposure Information:
- These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
- A time weighted average (TWA) has been established for glycerin (Safe Work Australia) of 10 mg/m³. In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. These methods should be used in preference to personal protective equipment.

Appropriate engineering controls:
- Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

Respiratory Protection:
- The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate.

Eye Protection:
- Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Hand Protection:
- Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and
Safety Data Sheet

Infosafe No™ 1CH30

Product Name: GLYCERINE

Not classified as hazardous

9. Physical and chemical properties

Form: Liquid
Appearance: Colourless liquid.
Odour: Odourless.
Melting Point: 18 °C
Boiling Point: 290 °C
Solubility in Water: Soluble.
Specific Gravity: 1.25
pH: Neutral to litmus.
Vapour Pressure: 0.0025 mm @ 50 °C
Vapour Density (Air=1): 3.17
Flash Point: 199 °C c.c.
Auto-Ignition Temperature: 392 °C
Molecular Weight: 92.09
Other Information: Sweet warm taste. About 0.6 times as sweet as cane sugar. Absorbs moisture from air, also absorbs H2S, HCN and SO2.

10. Stability and reactivity

Chemical Stability: Stable.
Conditions to Avoid: Heat, flames, ignition sources and incompatibles.
Incompatible Materials: Strong oxidizing agents, halogens, ethylene oxide, and nitric acid/sulfuric acid. May react violently with acetic anhydride, nitrobenzene and alkali metal hydrides.
Hazardous Decomposition Products: Oxides of carbon.
Possibility of hazardous reactions: Contact with strong oxidizing agents such as chromium trioxide, potassium chlorate and potassium permanganate may produce an explosion.

11. Toxicological Information

Acute Toxicity - Oral: LD50 (rat): 12600 mg/kg.

Ingestion: May be harmful if swallowed. May cause drowsiness, gastrointestinal pain, cramps, nausea, headaches, dizziness, vomiting and diarrhoea, unconsciousness, and if excessively large amounts are ingested, may experience dehydration, nausea, vomiting, kidneys, coma and death may result.

Inhalation: Irritating to mucous membranes and respiratory tract.

Skin: May be harmful if absorbed through the skin causing irritating.

Eye: May cause irritation to the eyes with symptoms including redness, burning sensation and tearing.

Carcinogenicity: No evidence of carcinogenic properties.
Chronic poisoning by ingestion or inhalation may include headache, giddiness, disturbance of vision, smell, taste and sleep, trembling of the limbs, weakness and mental excitement. May be accompanied by loss of appetite, nausea, vomiting and diarrhoea. Prolonged or repeated exposure may cause toxicity to kidneys.

Mutagenicity
No evidence of mutagenic effects.

12. Ecological information

Persistence and degradability
Biologic degradation: 63%/14d
No bioaccumulation is to be expected (log P(o/w <1).

Acute Toxicity - Fish
LC50(Carassius auratus): > 5000 mg/l /24 h.

Acute Toxicity - Daphnia
EC50 (Daphnia magna): > 10000 mg/l /24 h.

Acute Toxicity - Algae
IC5 (Scenedesmus quadricauda): > 10000 mg/l /7d.

Acute Toxicity - Bacteria
EC5(Pseudomonas putida): > 10000 mg/l /16 h.

Acute Toxicity - Other Organisms
Protozoa: EC5 (Entosiphon sulcatum): 3200 mg/l /72 h.

13. Disposal considerations

Dispose of according to relevant local, state and federal government regulations.

14. Transport information

Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. Not classified as a Dangerous Good according to the International Maritime Dangerous Goods Code (IMDG). Not classified as a Dangerous Good according to the International Air Transport Association (IATA).

15. Regulatory information

Listed in the Australian Inventory of Chemical Substances (AICS). Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.

16. Other Information


Paul McCarthy Ph. (08) 8440 2000

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Product Name: GLYCERINE

Empirical Formula: CH2 OH CH OH CH2 OH

Structural Formula: Not classified as hazardous

...End Of MSDS...