

SECTION 1 – IDENTIFICATION

1.1 Product Identifier:

Product Name : Glycerol
Product Number : BUF-1120

1.2 Other means of identification

No data available.

1.3 Relevant identified uses of the substance or mixture and uses advised against:

Relevant identified uses

R&D use only.

Uses advised against

Not for pharmaceutical, household or other uses.

1.4 Details of the supplier of the safety data sheet

Manufactured/Supplied by:

Axil Scientific Pte Ltd
2 Tukang Innovation Grove
#06-01, JTC MedTech Hub
Singapore 618305

Tel: +65 6775 7318

Email: custcare@axilscientific.com

Apical Scientific Sdn Bhd
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Taman Serdang Perdana, Seksyen 2
Seri Kembangan 43300
Selangor Darul Ehsan, Malaysia

Tel: +603 8943 3252

Email: custcare@apicalscientific.com

1.5 Emergency phone number:

Monday – Friday, 8:00 a.m. to 6:00 p.m.
+65 6775 7318 (Singapore)
+603 8943 3252 (Malaysia)

SECTION 2 – HAZARD IDENTIFICATION

2.1 GHS Classification

Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements.

Not a hazardous substance or mixture.

2.3 Other hazards

None known.

SECTION 3 – COMPOSITION/ INFORMATION ON INGREDIENTS

Substance/Mixture: Substance

3.1 Substance

Formula: $C_3H_8O_3$
Synonyms: Glycerin
Molecular weight: 92.09 g/mol

Component	Classification	Concentration
Glycerol		
CAS-No. 56-81-5 EC-No. 200-289-5		> 95 %

3.2 Remarks

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4 – FIRST-AID MEASURES

4.1 Description of first-aid measures

No hazards which require special first aid measures.

After Eye Contact

Immediately flush eyes with copious amounts of water for at least 15 minutes. Remove contact lens.

After Skin Contact

Immediately wash skin thoroughly with soap and copious amounts of water. Consult a physician.

After Inhalation

Remove to fresh air. If not breathing, give artificial respiration or if breathing is difficult, give oxygen.

After Ingestion

Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most important symptoms and effects, both acute and delayed

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

4.3 Indication of immediate medical attention and special treatment needed

No data available.

SECTION 5 – FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Use water spray, CO_2 , dry or chemical powder.

5.2 Special Exposure Hazards

Carbon oxides. Thermal decomposition can lead to the release of irritating gases and vapors.

5.3 Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

5.4 Further information

Product itself does not burn.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Prevent skin/eye contact. Use personal protective equipment. Ensure adequate ventilation.

6.2 Environmental Precautions

Do not allow material into sewers and drainage systems.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated materials as waste according to section 13. Ensure adequate ventilation. Dispose of the material collected according to regulations.

6.4 Reference to other sections

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.

SECTION 7 – HANDLING AND STORAGE

7.1 Precautions for safe handling

No special handling methods are required.

7.2 Conditions for safe storage, including any incompatibilities

No special storage conditions are required.

Requirements to be met by storerooms and receptacles

No special requirements.

Information about storage in one common storage facility

No special requirements.

7.3 Specific end use(s)

The product is for Research Use Only.

SECTION 8 – EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control Parameters

Component	CAS-No.	Value	Control parameters	Basis
Glycerol	56-81-5	PEL (long-term)	10 mg/m ³	Singapore. Workplace Safety and Health Act – First Schedule Permissible Exposure Limits of Toxic Substances

8.2 Exposure Controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Use process enclosures, local exhaust ventilation, or other engineering controls as needed.

Eye/face Protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves must satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of dangerous substances at the specific workplace.

Respiratory Protection

Respiratory protection is not required. Where protection from nuisance levels of dust is desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Keep away from drains, surface and ground waters. Avoid release into the environment.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Physical state	Solution
b) Color	Colourless
c) Odour	Not available
d) Melting/freezing point	18 °C
e) Initial boiling point and boiling range	290 °C
f) Flammability (solid, gas)	Not available
g) Upper/lower flammability or explosive limits	Not available
h) Flash point	160 °C
i) Autoignition temperature	Not available
j) Decomposition temperature	Not available
k) pH	Not available
l) Viscosity	Not available
m) Water solubility	33g/100ml
n) Partition coefficient: n-octanol/water	Not available
o) Evaporation rate	Not available
p) Vapor pressure	Not available
q) Density	Not available
r) Relative density	Not available
s) Relative vapor density	Not available
t) Particle characteristics	Not available
u) Explosive properties	Product does not present an explosion hazard
v) Oxidizing properties	Not available

9.2 Other safety information

No further relevant information is available.

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

No data available.

10.2 Chemical stability

Product is stable under normal conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Keep away from heat, flames and sources of ignition.

10.5 Incompatible material

No data available.

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

No data available.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glycerol	LD50 = 12600 mg/kg (Rat)	LD50 > 10 g/kg (Rabbit)	LC50 > 570 mg/m ³ (Rat) 1h

Skin corrosion/irritation

No data available.

Serious eye damage/eye irritation

No data available.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

STOT (Specific target organ toxicity) – single exposure

No data available.

STOT (Specific target organ toxicity)-repeated exposure

No data available.

Aspiration hazard

No data available.

11.2 Other information

As far as we are aware, the chemical, physical, and toxicological characteristics have not been comprehensively examined.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Information on ecological effects

Toxicity

No data available.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Glycerol	LC50: 51 – 57 ml/L, 96h static (Oncorhynchus mykiss)	EC50: > 500 mg/L, 24h (Daphnia magna)		

Persistence and degradability

No data available.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Results of PBT and vPvB assessment

No data available. A chemical safety assessment has not been carried out.

Endocrine disrupting properties

No data available.

12.2 Other adverse effects

No data available.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Product

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Observe all federal, state and local environmental regulations when disposing of this material.

Uncleaned packaging

Disposal must be made according to official regulations.

Recommendation cleansing agents.

Water, if necessary, together with cleansing agents.

SECTION 14 – TRANSPORT INFORMATION

14.1 UN Number

ADR/RID: -

IMDG: -

IATA-DGR: -

14.2 UN Proper Shipping Name:

ADR/RID: -

IMDG: -

IATA-DGR: -

14.3 Transport Hazard Class(es)

ADR/RID: -

IMDG: -

IATA-DGR: -

14.4 Packing Group

ADR/RID: -

IMDG: -

IATA-DGR: -

14.5 Environmental Hazards

ADR/RID: no

IMDG: marine pollutant: no

IATA-DGR: no

14.6 Special Precaution for Users

Not applicable.

14.7 Incompatible Materials

No data available.

SECTION 15 – REGULATORY INFORMATION

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

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subject to the requirements in the Act/Regulations.

Environmental Protection and Management Act
and Environmental Protection and Management
(Hazardous Substances) Regulations

: Not applicable

Fire Safety (Petroleum and Flammable Materials) Regulations

: Not applicable

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16 – OTHER INFORMATION

Date of Issue: JULY 11, 2008

Date of Revision: OCTOBER 9, 2025

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

16.1 Relevant phrases

Not applicable.

16.2 Abbreviations and acronyms

ADR. Accord europeen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road).

ADN. The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

IMDG. International Maritime Code for Dangerous Goods.

IATA. International Air Transport Association.

GHS. Globally Harmonised System of Classification and Labelling of Chemicals.

EINECS. European Inventory of Existing Commercial Chemical Substances.

ELINCS. European List of Notified Chemical Substances.

CAS. Chemical Abstracts Service (division of the American Chemical Society).

VOC. Volatile Organic Compounds (USA, EU).

LC50. Lethal concentration, 50 percent.

LD50. Lethal dose, 50 percent.

PBT. Persistent, Bioaccumulative and Toxic.

vPvB. very Persistent and very Bioaccumulative.

Eye Irrit 2. Serious eye damage/eye irritation – Category 2.

Skin Irrit 2. Skin irritation – Category 2.

Skin Corr. Skin corrosion – Category 2.

Met Corr 1. Metal corrosion – Category 2.

STOT SE 3. Specific target organ toxicity (single exposure) – Category 3.