

## SECTION 1 – IDENTIFICATION

**Product Identifier:** 100bp DNA Ladder, Ready-To-Use  
Molecular Biology Grade

**Catalogue Number:** 5130

**Recommended use of the chemical and restrictions on use:**

Recommended for sizing and approximate quantification of a wide range of double-stranded DNA on agarose or polyacrylamide gels. The ladder is a mixture of chromatography-purified individual DNA fragments.

For R&D use only. Not for pharmaceutical, household or other uses.

**Supplier Information:**

Axil Scientific Pte Ltd  
41 Science Park Road  
#04-08 The Gemini  
Singapore Science Park II  
Singapore 117610  
Tel: +65 6775 7318  
Fax: +65 6775 7211  
Email: [info@axilscientific.com](mailto:info@axilscientific.com)

Apical Scientific Sdn Bhd  
No 7-1 to 7-4 Jalan SP 2/7  
Taman Serdang Perdana, Seksyen 2  
Seri Kembangan 43300  
Selangor Darul Ehsan, Malaysia  
Tel: +603 8943 3252  
Fax: +603 8943 3243  
Email: [custcare@apicalscientific.com](mailto:custcare@apicalscientific.com)

**Emergency phone number:**

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

## SECTION 2 – HAZARDS IDENTIFICATION

**GHS Classification**

Not a dangerous substance or mixture according to the Globally Harmonised System (GHS).

**Other Hazards** - None

## SECTION 3 – COMPOSITION/ INFORMATION ON INGREDIENTS

**Chemical characterization:** Mixture

**Chemical Identity:** Glycerol  
**Synonyms:** Glycerin  
1,2,3-propanetriol  
glycol alcohol

**Molecular Formula:** C<sub>3</sub>H<sub>8</sub>O<sub>3</sub>  
**Molecular Weight:** 92.10 g/mol  
**CAS No.:** 56-81-5  
**EC No.:** 200-289-5

**Other Components:**

Components of mixture that are not listed are not hazardous to health or the environment within the meaning of GHS, and/or are present below their cut-off levels.

## SECTION 4 – FIRST-AID MEASURES

### Eye Contact

Flush eyes continuously for 15 minutes with water as a precaution, remove contact lenses if easily possible.

### Skin Contact

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

### Inhalation

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

### Ingestion

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician if you feel unwell.

### 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.

### Indication of immediate medical attention and special treatment needed

Data not available.

## SECTION 5 – FIRE-FIGHTING MEASURES

### Extinguishing Media

Use water spray, dry chemical powder, carbon dioxide or alcohol-resistant foam.

### Special Exposure Hazards

Nature of decomposition products not known. May include carbon oxides, nitrogen oxides, phosphorous oxides and metal oxides.

### Special Fire-fighting Procedures

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

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

### Personal Precautions

Prevent skin/eye contact. Use personal protective equipment. Ensure adequate ventilation. Avoid breathing vapours, mist or gas.

### Environmental Precautions

Do not allow material into sewers and drainage systems.

### Methods for Cleaning Up

Clean up spills immediately, contain and soak up spill with absorbent. Place used absorbent into suitable, covered, labeled containers for disposal.

## SECTION 7 – HANDLING AND STORAGE

### Precautions for safe handling

Use with adequate ventilation as necessary or desired. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

### Conditions for safe storage, including any incompatibilities

Store in tightly closed container at -20°C. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

## SECTION 8 – EXPOSURE CONTROLS/ PERSONAL PROTECTION

### Occupational Exposure Limits

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

### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice.

### Eye/ Face Protection

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

### Skin/ Hand 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 have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

### Body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory Protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are 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).

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- |    |                        |                |
|----|------------------------|----------------|
| a) | <b>Appearance</b>      | Green solution |
| b) | <b>Odour</b>           | Odourless      |
| c) | <b>Odour Threshold</b> | Not available  |

d)	<b>pH</b>	7.8 – 8.2 (Neat, 25 °C)
e)	<b>Melting/freezing point</b>	Not available
f)	<b>Initial boiling point and boiling range</b>	100 °C
g)	<b>Flash point</b>	Not available
h)	<b>Evaporation rate</b>	Not available
i)	<b>Flammability (solid, gas)</b>	Not available
j)	<b>Upper/lower flammability or explosive limits</b>	Not available
k)	<b>Vapour pressure (mm Hg)</b>	Not available
l)	<b>Vapour density</b>	Not available
m)	<b>Relative density</b>	1 g/cm <sup>3</sup> (20 °C)
n)	<b>Water solubility</b>	Fully miscible
o)	<b>Partition coefficient: n-octanol/water</b>	Not available
p)	<b>Autoignition temperature</b>	Not available
q)	<b>Decomposition temperature</b>	Not available
r)	<b>Viscosity</b>	Not available

## SECTION 10 – STABILITY AND REACTIVITY

### Reactivity

Data not available.

### Chemical stability

Stable under storage conditions.

### Possibility of hazardous reactions

Data not available.

### Conditions to avoid

Data not available.

### Incompatible material

Strong oxidizing agents.

---

**Hazardous decomposition products**

Data not available.

**SECTION 11 – TOXICOLOGICAL INFORMATION**

**Acute toxicity**

Data not available.

**Skin corrosion/irritation**

Data not available.

**Serious eye damage/eye irritation**

Data not available.

**Respiratory or skin sensitization**

Data not available.

**Germ cell mutagenicity**

Data not available.

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**

Data not available.

**Specific target organ toxicity – single exposure**

Data not available.

**Specific target organ toxicity – repeated exposure**

Data not available.

**Aspiration hazard**

Data not available.

**Other information**

RTECS: Not available

**SECTION 12 – ECOLOGICAL INFORMATION**

**Toxicity**

Data not available.

**Persistence and degradability**

The preparation is readily biodegradable.

**Bioaccumulative potential**

Data not available.

**Mobility in soil**

Data not available.

**Other adverse effect**

Data not available.

**SECTION 13 – DISPOSAL CONSIDERATIONS****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose off as unused product.

**SECTION 14 – TRANSPORT INFORMATION****UN Number**

ADR/RID: -

IMDG: -

IATA-DGR: -

**UN Proper Shipping Name:**

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA-DGR: Not dangerous goods

**Transport Hazard Class(es)**

ADR/RID: -

IMDG: -

IATA-DGR: -

**Packing Group**

ADR/RID: -

IMDG: -

IATA-DGR: -

**Environmental Hazards**

ADR/RID: no

IMDG: marine pollutant: no

IATA-DGR: no

**Special Precaution for Users**

Data not available

**SECTION 15 – REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture**

Data not available.

**SECTION 16 – OTHER INFORMATION**

**Date of Issue:** DECEMBER 27, 2011

**Date of Revision:** MAY 07, 2017

*The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. Axil Scientific Pte Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.*