GE Healthcare

Material Safety Data Sheet

Australia English

1. Identification of the material and supplier

Product name T4 DNA Ligase; part of 'pMOSBlue Blunt Cloning

Kit'

Catalogue Number **RPN5110**

Component Number NIF1279

Company details

Manufacturer Supplier

GE Healthcare UK Ltd GE Healthcare Bio-Sciences Building 4B, Parklands Estate Amersham Place Little Chalfont 21 South Street Buckinghamshire HP7 9NA Rydalmere NSW 2116 Australia England

 $+4\overline{4}$ 0870 606 1921 +61 2 8820 8299

000 and +61 2 9846 4000 Emergency telephone number

ADG

<u>Uses</u>

Industrial applications. Area of application Analytical chemistry. Research. Material uses

Product type

2. Hazards identification

Xi; R36/37/38 Classification

🕅 36/37/38- Irritating to eyes, respiratory system and skin. Risk phrases

Statement of hazardous/dangerous nature

HAZARDOUS SUBSTANCE, NON-DANGEROUS GOODS.

Composition/information on ingredients 3.

Mixture

Ingredient name CAS number Concentration glycerol

Additional information

Other ingredients, determined not to be hazardous according to Safe Work Australia criteria, and not dangerous according to the ADG Code, make up the product concentration to 100%.

4. First-aid measures

First-aid measures

Skin contact

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for Eye contact and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

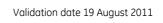
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly

before reuse.



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Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and aet medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt

Ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders

 $\overline{\mathsf{M}}$ o action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

5. Fire-fighting measures

Extinguishing media

Use an extinguishing agent suitable for the surrounding fire. Suitable

Not suitable None known.

Special exposure hazards Fromptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No

action shall be taken involving any personal risk or without suitable training. $^{
m I}$ n a fire or if heated, a pressure increase will occur and the container may burst.

Special protective equipment for

fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus

(SCBA) with a full face-piece operated in positive pressure mode. Decomposition products may include the following materials:

carbon dioxide carbon monoxide

Hazardous combustion products

6. Accidental release measures

Personal precautions

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8). Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency

Methods for cleaning up

Environmental precautions

contact information and section 13 for waste disposal. Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste

disposal container. Dispose of via a licensed waste disposal contractor.

7. Handling and storage

Handling

Small spill

Fut on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do

Storage

 $\overline{\mathbb{V}}$ o not store above the following temperature: -70°C (-94°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.



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8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name

dlycerol

Occupational exposure limits

Safe Work Australia (Australia, 8/2005).

TWA: 10 mg/m³ 8 hour(s).

Recommended monitoring

procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to girbarra contaminants below any recommended or statutory limits.

airborne contaminants below any recommended or statutory limits.

Hygiene measuresWash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to

remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that

eyewash stations and safety showers are close to the workstation location.

Personal protection

Skin

Eyes Safety eyewear complying with an approved standard should be used when a risk assessment indicates

this is necessary to avoid exposure to liquid splashes, mists or dusts.

Hands Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times

when handling chemical products if a risk assessment indicates this is necessary.

RespiratorySe a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk

assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Personal protective equipment for the body should be selected based on the task being performed and

the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls Emissions from ventilation or work process equipment should be checked to ensure they comply with the

requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable

levels.

9. Physical and chemical properties

Physical stateLiquid.ColourColourless.OdourOdourless.

Flash point Product does not sustain combustion.]

Solubility Easily soluble in the following materials: cold water and hot water.

10. Stability and reactivity

StabilityThe product is stable.Materials to avoidNo specific data.

11. Toxicological information

Potential acute health effects

InhalationIrritating to respiratory system.IngestionFritating to mouth, throat and stomach.

Skin contactIrritating to skin.Eye contactIrritating to eyes.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
g lycerol	LD50 Intraperitoneal	Rat	4420 mg/kg	-
	LD50 Intravenous	Rat	5566 mg/kg	-
	LD50 Oral	Rat	12600 mg/kg	-
	LD50 Subcutaneous	Rat	100 mg/kg	-
	LDLo Intramuscular	Rat	10 mL/kg	-
	LDLo Intramuscular	Rat	10 mg/kg	-
	TDLo Intramuscular	Rat	8 mL/kg	-
	TDLo Intramuscular	Rat	4 mL/kg	-
	TDLo Intramuscular	Rat	>5000 mg/kg	-
	TDLo Intramuscular	Rat	4000 mg/kg	-

Conclusion/Summary Not available.

Potential chronic health effects

Chronic toxicity

Conclusion/Summary Not available.

Carcinogenicity



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Conclusion/Summary Not available.

Mutagenicity

Conclusion/Summary Not available.

Teratogenicity

Conclusion/Summary Not available.

Reproductive toxicity

Conclusion/Summary Not available.

Chronic effects

Carcinogenicity

No known significant effects or critical hazards.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

Teratogenicity

No known significant effects or critical hazards.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

To known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation Adverse symptoms may include the following:

respiratory tract irritation

coughing

Ingestion No specific data.

Skin Adverse symptoms may include the following:

Eyes irritation redness

Adverse symptoms may include the following:

irritation watering redness

Target organs Contains material which may cause damage to the following organs: kidneys, upper respiratory tract, skin,

eyes.

12. Ecological information

Environmental effects No known significant effects or critical hazards.

Aquatic ecotoxicity

 Product/ingredient name
 Test
 Result
 Species
 Exposure

 glycerol
 Acute LC50 54 to 57 ml/L Fresh water
 Fish - Rainbow trout, donaldson trout - Oncorhynchus
 96 hours

Oncorhynchus mykiss - 0.9 g

Conclusion/Summary Not available.

Biodegradability

Conclusion/Summary Not available.

Product/ingredient nameAquatic half-lifePhotolysisBiodegradabilityglycerol->60%; 28 day(s)Readily

Other adverse effects No known significant effects or critical hazards.

13. Disposal considerations

Methods of disposal The generation of waste should be avoided or minimised wherever possible. Empty containers or liners

may retain some product residues. This material and its container must be disposed of in a safe way. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

International transport regulations

Not classified.



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15. Regulatory information

Standard for the Uniform Scheduling of Drugs and Poisons

Not regulated.

Control of Scheduled Carcinogenic Substances

Ingredient name
Not available.

Australia inventory (AICS)

All components are listed or exempted.

EU Classification Xi; R36/37/38
HCS Classification Irritating material
Target organ effects

16. Other information

<u>History</u>

Date of printing19 August 2011Date of previous issue17 September 2009

Date of issue 19 August 2011 **Version**

Indicates information that has changed from previously issued version.

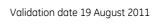
Enquiries regarding MSDS content should be directed to: our local sales office.

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