


Material Safety Data Sheet

Canada
English

Section 1. Chemical product and company identification

Product name	T Reagent; part of 'Thermo Sequenase™ Fluorescent Labelled Primer Cycle Sequencing Kit'		
Catalogue Number	RPN2436	 9 0 R P N 2 4 3 6	
Component Number	NIF1224		
Material uses	Industrial applications: Analytical chemistry. Research.		
Product type	Liquid.		
Validation date	14 June 2011		
Print date	14 June 2011		
Supplier	GE Healthcare UK Ltd Amersham Place Little Chalfont Buckinghamshire HP7 9NA England +44 0870 606 1921		
<u>In case of emergency</u>	US	ChemTrec (US)	1-800-424-9300
	Canada	ChemTrec (US)	1-703-527-3887

2. Hazards identification

Physical state	Liquid.
Odor	Odorless.
Emergency overview	WARNING! MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Precautionary measures

Potential acute health effects

Eyes	Moderately irritating to eyes.
Skin	Moderately irritating to the skin.
Inhalation	Moderately irritating to the respiratory system.
Ingestion	No known significant effects or critical hazards.

Potential chronic health effects

Chronic effects	Contains material that can cause target organ damage.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.
Target organs	Contains material which may cause damage to the following organs: kidneys, upper respiratory tract, skin, eye, lens or cornea.
Inhalation	Adverse symptoms may include the following: respiratory tract irritation coughing
Ingestion	No specific data.
Skin	Adverse symptoms may include the following: irritation redness



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Eyes	Adverse symptoms may include the following: irritation watering redness
Medical conditions aggravated by over-exposure	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

3. Composition/information on ingredients

<u>Name</u>		<u>CAS number</u>	<u>% by weight</u>
glycerol	56-81-5	1 - 5	

Section 4. First aid measures

Eye contact	In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if irritation occurs.
Skin contact	Wash with soap and water. Get medical attention if symptoms appear.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms appear.
Ingestion	Do not ingest. Get medical attention if symptoms appear.
Protection of first-aiders	No 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.

Section 5. Fire-fighting measures

Flammability of the product	In a fire or if heated, a pressure increase will occur and the container may burst.
<u>Extinguishing media</u>	
Suitable	Use an extinguishing agent suitable for the surrounding fire.
Not suitable	None known.
Special exposure hazards	Promptly 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.
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.

Section 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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
Environmental precautions	Avoid dispersal of spilled 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).
Methods for cleaning up	Stop leak if without risk. Move containers from spill area. Approach 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 spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
Small spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Handling	Put 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. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor 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 not reuse container.
Storage	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 unlabeled containers. Use appropriate containment to avoid environmental contamination.



Section 8. Exposure controls/personal protection

Product name

glycerol

Exposure limits

CA Alberta Provincial (Canada, 10/2006).8 hrs OEL: 10 mg/m³ 8 hour(s). Form: Mist**CA British Columbia Provincial (Canada, 7/2007).**TWA: 10 mg/m³ 8 hour(s). Form: MistTWA: 3 mg/m³ 8 hour(s). Form: Respirable mist**CA Ontario Provincial (Canada, 3/2007).**TWA-EV: 10 mg/m³ 8 hour(s). Form: mist**CA Quebec Provincial (Canada, 12/2006).**TWA-EV: 10 mg/m³ 8 hour(s). Form: mist

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, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures

Wash 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

Respiratory

Use 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.

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.

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.

Skin

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.

Section 9. Physical and chemical properties

Physical state

Liquid.

Color

Colorless.

Odor

Odorless.

Volatility

< 1% (w/w)

Solubility

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

Section 10. Stability and reactivity

Stability

The product is stable.

Materials to avoid

No specific data.

Possibility of hazardous reactions

Conditions of reactivity

Non-flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.

Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.

Section 11. Toxicological information

Acute toxicity

Product/ingredient name

glycerol

Result

Species

Dose

Exposure

LD50 Dermal

Rabbit

>10 g/kg

-

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 mg/kg

-

TDLo Intramuscular

Rat

8 mL/kg

-

TDLo Intramuscular

Rat

5000 mg/kg

-

Conclusion/Summary

Not available.

Classification

Product/ingredient name

ACGIH

IARC

EPA

NIOSH

NTP

OSHA



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Not available.

Synergistic products

Not available.

Section 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 mykiss - 0.9 g	96 hours

Conclusion/Summary Not available.**Partition coefficient: n-octanol/water** Not available.**Bioconcentration factor** Not available.**Other adverse effects** No known significant effects or critical hazards.**Section 13. Disposal considerations**

Waste disposal The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA classification Not classified**Disposal should be in accordance with applicable regional, national and local laws and regulations.****Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.****Section 14. Transport information****International transport regulations**

Not classified.

Section 15. Regulatory information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS (Canada) Not controlled under WHMIS (Canada).**Canadian lists** **CEPA Toxic substances:** None of the components are listed.**Canadian ARET:** None of the components are listed.**Canadian NPRI:** None of the components are listed.**Alberta Designated Substances:** None of the components are listed.**Ontario Designated Substances:** None of the components are listed.**Quebec Designated Substances:** None of the components are listed.**Canada inventory** Not determined.**International regulations****International lists** **Australia inventory (AICS):** Not determined.**China inventory (IECSC):** Not determined.**Japan inventory (ENCS):** Not determined.**Japan inventory (ISHL):** Not determined.**Korea inventory (KECI):** Not determined.**New Zealand Inventory of Chemicals (NZIoC):** Not determined.**Philippines inventory (PICCS):** Not determined.**Chemical Weapons Convention**
List Schedule I Chemicals**Chemical Weapons Convention**
List Schedule II Chemicals**Chemical Weapons Convention**
List Schedule III Chemicals

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Section 16. Other information

The customer is responsible for determining the PPE code for this material.

 Indicates information that has changed from previously issued version.

History

Date of printing	14 June 2011	Date of previous issue	28 October 2008
Date of issue	14 June 2011	Version	5

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



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