Material Safety Data Sheet

Canada
English

Section 1. Chemical product and company identification

Product name

Loading Dye; part of 'Thermo Sequenase™ Fluorescent Labelled Primer Cycle Sequencing Kit, 500 templates'

Catalogue Number

RPN2536

Component Number

NIF1644

Material uses Industrial applications: Analytical chemistry. Research.
Product type Liquid.
Validation date 8 July 2011
Print date 08 July 2011

Supplier

GE Healthcare UK Ltd
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In case of emergency	US	ChemTrec (US)	1-800-424-9300
	Canada	ChemTrec (US)	1-703-527-3887

2. Hazards identification

Physical state Liquid.
Odor Ammoniacal.

Emergency overview WARNING!

CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. DEVELOPMENTAL HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE ADVERSE DEVELOPMENTAL EFFECTS.

Precautionary measures Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Keep container tightly closed. Use personal protective equipment as required. Wash thoroughly after handling.

Potential acute health effects

Eyes Irritating to eyes.
Skin Irritating to skin.
Inhalation Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion Harmful if swallowed.

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 Contains material which can cause developmental abnormalities.
Fertility effects No known significant effects or critical hazards.
Target organs Contains material which may cause damage to the following organs: the reproductive system, mucous membranes, upper respiratory tract, skin, eyes, central nervous system (CNS).

Inhalation	Adverse symptoms may include the following: respiratory tract irritation coughing reduced fetal weight increase in fetal deaths
Ingestion	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths
Skin	Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths
Eyes	Adverse symptoms may include the following: pain or irritation watering redness reduced fetal weight increase in fetal deaths
Medical conditions aggravated by over-exposure See toxicological information (Section 11)	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

3. Composition/information on ingredients

Name		CAS number	% by weight
Formamide	75-12-7	95 -	

Section 4. First aid measures

Eye contact	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
Skin contact	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
Ingestion	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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.
Extinguishing media	
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.
Hazardous combustion products	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
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. 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.

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. Remove contaminated clothing and protective equipment before entering eating areas. Avoid exposure during pregnancy. 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	**Exposure limits**
Formamide	**CA Alberta Provincial (Canada, 4/2009). Absorbed through skin.** 8 hrs OEL: 18 mg/m³ 8 hour(s). 8 hrs OEL: 10 ppm 8 hour(s). **CA British Columbia Provincial (Canada, 10/2009). Absorbed through skin.** TWA: 10 ppm 8 hour(s). **CA Ontario Provincial (Canada, 7/2010). Absorbed through skin.** TWA: 18 mg/m³ 8 hour(s). TWA: 10 ppm 8 hour(s). **CA Quebec Provincial (Canada, 6/2008). Absorbed through skin.** TWAEV: 18 mg/m³ 8 hour(s). TWAEV: 10 ppm 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, 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.
Flash point	Closed cup: >93.3°C (>199.9°F)
Color	Red.
Odor	Ammoniacal.
Volatility	95% (w/w)
Odor threshold	100 ppm
VOC	95 % (w/w) [ISO 11890-1]
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	Under normal conditions of storage and use, hazardous reactions will not occur.
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	Result	Species	Dose	Exposure
Formamide	LD Dermal	Rat	>13500 mg/kg	-
	LD Oral	Rat	7450 mg/kg	-
	LD50 Dermal	Rabbit	17 g/kg	-
	LD50 Intraperitoneal	Rat	>5700 mg/kg	-
	LD50 Intravenous	Rat	5.6 g/kg	-
	LD50 Oral	Rat	5577 mg/kg	-
	LD50 Oral	Rat	5570 mg/kg	-
	LD50 Oral	Rat	4000 mg/kg	-
	LD50 Subcutaneous	Rat	>4 g/kg	-
	LD50 Unreported	Rat	>3 g/kg	-
	LDLo Oral	Rat	5000 mg/kg	-
	LC50 Inhalation Gas.	Rat	>3900 ppm	6 hours

Conclusion/Summary Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Not available.						

Synergistic products Not available.

Section 12. Ecological information

Environmental effects	No known significant effects or critical hazards.
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. 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

RCRA classification Not available.

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.

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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)	Class D-2A: Material causing other toxic effects (Very toxic).
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	All components are listed or exempted.

International regulations

International lists	**Australia inventory (AICS)**: All components are listed or exempted. **China inventory (IECSC)**: All components are listed or exempted. **Japan inventory**: All components are listed or exempted. **Korea inventory**: All components are listed or exempted. **New Zealand Inventory of Chemicals (NZIoC)**: All components are listed or exempted. **Philippines inventory (PICCS)**: All components are listed or exempted.
Chemical Weapons Convention List Schedule I Chemicals	Not listed
Chemical Weapons Convention List Schedule II Chemicals	Not listed
Chemical Weapons Convention List Schedule III Chemicals	Not listed

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	08 July 2011	**Date of previous issue**	21 October 2008
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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.