

Material Safety Data Sheet

United States
English

Section 1. Chemical product and company identification

Product name	Streptavidin-horseradish Peroxidase Conjugate, 2 ml		
Catalogue Number	RPN1231-2ML		
Component Number	RPN1231V		
Material uses	Industrial applications: Analytical chemistry. Research.		
Product type	Liquid.		
Validation date	18 May 2011		
Print date	18 May 2011		
Supplier	GE Healthcare UK Ltd Amersham Place Little Chalfont Buckinghamshire HP7 9NA England +44 0870 606 1921		
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	Odorless.
OSHA/HCS status	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview	No specific hazard. SUSPECT CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER.
Precautionary measures	 Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required.
Routes of entry	Dermal contact. Eye contact. Inhalation. Ingestion.
Potential acute health effects	
Eyes	No known significant effects or critical hazards.
Skin	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.
Potential chronic health effects	
Chronic effects	No known significant effects or critical hazards.
Carcinogenicity	Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.
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.
Inhalation	No specific data.
Ingestion	No specific data.
Skin	No specific data.
Eyes	No specific data.
Medical conditions aggravated by over-exposure	None known.



Article Number
25005995



Page: 1/5

Validation date 18 May 2011

Version 7

3. Composition/information on ingredients

Name	CAS number	% by weight
Sodium nitrate	7631-99-4	0.105 - 0.1175

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. 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.
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 - obtain special instructions before use. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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

Consult local authorities for acceptable exposure limits.

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	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	A respirator is not needed under normal and intended conditions of product use.
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	0% (v/v)
VOC	☒ % (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. Not considered to be a product presenting a risk of explosion.

Section 11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
☒ Sodium nitrate	LD50 Oral	Rat	1267 mg/kg	-
Conclusion/Summary	Not available.			

Sensitizer

Conclusion/Summary	Not available.
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Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
☒ Sodium nitrate	-	2A	-	-	-	-

Section 12. Ecological information

Environmental effects	No known significant effects or critical hazards.
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Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
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Sodium nitrate	-	Acute EC50 522 mg/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 0.0014 g	96 hours
	-	Acute LC50 3400000 ug/L	Crustaceans - Penaeidean shrimp - Penaeus sp. - 500 to 1500 mg	48 hours
	-	Acute LC50 3581000 ug/L Fresh water	Daphnia - Water flea	48 hours
	-	Chronic NOEC 720 mg/L Fresh water	- Daphnia magna Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss - Juvenile (Fledgling, Hatchling, Weanling) - 251 mg	96 hours

Conclusion/Summary Not available.

Biodegradability

Conclusion/Summary 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 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

HCS Classification Carcinogen

U.S. Federal regulations TSCA 8(a) IUR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): Not determined.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: No products were found.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: disodium hydrogenorthophosphate

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

**Clean Air Act Section 112(b)
Hazardous Air Pollutants (HAPs)** Not listed

**Clean Air Act Section 602 Class I
Substances** Not listed

**Clean Air Act Section 602 Class II
Substances** Not listed



Article Number

25005995



9 5 2 5 0 0 5 9 9 5

Page: 4/5

Validation date 18 May 2011

Version 7

DEA List I Chemicals (Precursor Chemicals) ☒ Not listed

DEA List II Chemicals (Essential Chemicals) ☒ Not listed

State regulations

Massachusetts ☒ None of the components are listed.
 New York ☒ None of the components are listed.
 New Jersey ☒ None of the components are listed.
 Pennsylvania ☒ The following components are listed: NITRIC ACID SODIUM SALT

California Prop. 65

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Albumins, blood serum	No.	No.	No.	No.

United States inventory (TSCA 8b) Not determined.

International regulations

International lists ☒ **Australia inventory (AICS):** Not determined.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
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

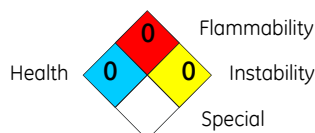
Chemical Weapons Convention List Schedule III Chemicals ☒ Not listed

Section 16. Other information

Label requirements SUSPECT CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER.

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

National Fire Protection Association (U.S.A.)



 Indicates information that has changed from previously issued version.

History

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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.



Article Number

25005995



9 5 2 5 0 0 5 9 9 5

Page: 5/5

Validation date 18 May 2011

Version 7