GE Healthcare

Material Safety Data Sheet

United States
English

Section 1. Chemical product and company identification

Product name

Stop Solution; part of 'TNF-alpha, Rat, Biotrak™ Assay, 96 wells'

Catalogue Number

RPN2744

Component Number

NIF1415

Material uses Industrial applications: Analytical chemistry. Research.

Product type Liquid.

Validation date 3 August 2011

Print date 04 August 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

CANCER HAZARD - CONTAINS MATERIAL WHICH CAN 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. 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 can 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.

See toxicological information (Section 11)

3. Composition/information on ingredients

Name	CAS number	% by weight
Sulphuric acid	7664-93-9	<1

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.

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 between the following temperatures: 2 to 8°C (35.6 to 46.4°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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Product name	Exposure limits
Sulphuric acid	**ACGIH TLV (United States, 2/2010). Notes: Refers to Appendix A -- Carcinogens. Thoracic fraction. See Appendix C, paragraph B. Thoracic Particulate Mass TLVs (TPM–TLVs) for those materials that are hazardous when deposited anywhere within the lung airways and the gas-exchange region. Sulfuric acid contained in strong inorganic acid mists ACGIH 2004 Adoption** TWA: 0.2 mg/m³ 8 hour(s). **NIOSH REL (United States, 6/2009).** TWA: 1 mg/m³ 10 hour(s). **OSHA PEL (United States, 11/2006).** TWA: 1 mg/m³ 8 hour(s). **OSHA PEL 1989 (United States, 3/1989).** TWA: 1 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	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	[Product does not sustain combustion.]
Color	Colorless.
Odor	Odorless.
Molecular weight	98.08
pH	2 to 3 [Conc. (% w/w): 100%]
Volatility	0% (v/v)
VOC	0 % (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
sulphuric acid	LD50 Oral	Rat	2140 mg/kg	-

Conclusion/Summary Not available.

Sensitizer

Conclusion/Summary Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
sulphuric acid	A2	1	-	-	Proven.	-

Section 12. Ecological information

Environmental effects No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
sulphuric acid	-	Acute LC50 42500 ug/L Marine water	Crustaceans - Aesop shrimp - Pandalus montagui - Adult	48 hours
	-	Acute LC50 42000 ug/L Fresh water	Fish - Western mosquitofish - Gambusia affinis - Adult	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.

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): All components are listed or exempted.

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: sulphuric acid

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
DEA List I Chemicals (Precursor Chemicals)	Not listed
DEA List II Chemicals (Essential Chemicals)	Not listed

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	Sulphuric acid	7664-93-9	<1
Supplier notification	Sulphuric acid	7664-93-9	<1

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

Massachusetts	None of the components are listed.
New York	The following components are listed: Sulfuric acid
New Jersey	The following components are listed: SULFURIC ACID; DIHYDROGEN SULFATE
Pennsylvania	The following components are listed: SULFURIC ACID

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Sulphuric acid	Yes.	No.	No.	No.

United States inventory (TSCA 8b) 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.

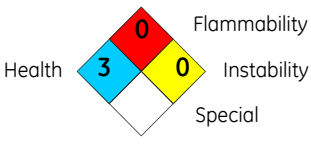
Chemical Weapons Convention List Schedule I Chemicals	Not listed
Chemical Weapons Convention List Schedule II Chemicals	Not listed
Chemical Weapons Convention List Schedule III Chemicals	Not listed

Section 16. Other information

Label requirements CANCER HAZARD - CONTAINS MATERIAL WHICH CAN 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

Date of printing	04 August 2011	**Date of previous issue**	05 July 2006
Date of issue	03 August 2011	**Version**	3

Notice to reader