


Material Safety Data Sheet

United States
English

Section 1. Chemical product and company identification

Product name	Hybridization Buffer; part of 'AlkPhos Direct™ Labelling Module, For 5000 cm ² membrane'		
Catalogue Number	RPN3681		
Component Number	NIF1550		
Material uses	Industrial applications: Analytical chemistry. Research.		
Product type	Liquid.		
Validation date	18 April 2011		
Print date	18 April 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.
OSHA/HCS status	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview	CAUTION! MAY CAUSE EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
Precautionary measures	Do not breathe vapor or mist. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
Routes of entry	Dermal contact. Eye contact. Inhalation. Ingestion.
Potential acute health effects	
Eyes	Moderately irritating to eyes.
Skin	Moderately irritating to the skin.
Inhalation	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	No known significant effects or critical hazards.
Potential chronic health effects	
Chronic effects	Contains material that may cause target organ damage, based on animal data.
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: skin, eyes.
Inhalation	No specific data.
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>
Urea	57-13-6	12

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	Wash with soap and water. Get medical attention if irritation develops.
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. 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. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. 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

Urea

Exposure limits

AIHA WEEL (United States, 1/2009).

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

No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure 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

☒ 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.

Flash point

☒ Product does not sustain combustion.]

Color

Yellowish.

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.

☒ Not considered to be a product presenting a risk of explosion.

Section 11. Toxicological information

Acute toxicity

Product/ingredient name

Urea

Result

LD50 Oral

Species

Rat

Dose

8471 mg/kg

Exposure

-

Conclusion/Summary

Not available.

Sensitizer

Conclusion/Summary

Not available.

Section 12. Ecological information

Environmental effects

No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name

Urea

Test

-

Result

Acute EC50 3910000 ug/L Fresh water

Species

Daphnia - Water flea
- Daphnia magna -
Neonate - <24 hours

Exposure

48 hours

-

Acute LC50 >1000 mg/L Marine water

Crustaceans -
Amphipod -
Chaetogammarus
marinus - Young - 5
mm

48 hours

-

Acute LC50 5000

Fish - Giant gourami

96 hours



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	ug/L Fresh water	- Colisa fasciata - Fingerling
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	<input checked="" type="checkbox"/> Irritating material <input checked="" type="checkbox"/> Target organ effects
U.S. Federal regulations	<input checked="" type="checkbox"/> TSCA 8(a) IUR Exempt/Partial exemption: Not determined United States inventory (TSCA 8b): All components are listed or exempted. <input checked="" type="checkbox"/> 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: Urea SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Urea: Immediate (acute) health hazard, Delayed (chronic) health hazard Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: No products were found. 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)	<input checked="" type="checkbox"/> Not listed
Clean Air Act Section 602 Class I Substances	<input checked="" type="checkbox"/> Not listed
Clean Air Act Section 602 Class II Substances	<input checked="" type="checkbox"/> Not listed
DEA List I Chemicals (Precursor Chemicals)	<input checked="" type="checkbox"/> Not listed
DEA List II Chemicals (Essential Chemicals)	<input checked="" type="checkbox"/> Not listed

State regulations

Massachusetts	<input checked="" type="checkbox"/> None of the components are listed.
New York	<input checked="" type="checkbox"/> None of the components are listed.
New Jersey	<input checked="" type="checkbox"/> None of the components are listed.



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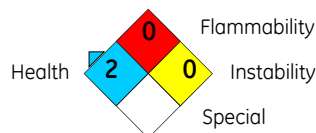
Pennsylvania	<input checked="" type="checkbox"/> None of the components are listed.
California Prop. 65	
United States inventory (TSCA 8b)	All components are listed or exempted.
International regulations	
International lists	<input checked="" type="checkbox"/> Australia inventory (AICS): All components are listed or exempted. <input checked="" type="checkbox"/> China inventory (IECSC): All components are listed or exempted. <input checked="" type="checkbox"/> Japan inventory: All components are listed or exempted. <input checked="" type="checkbox"/> Korea inventory: All components are listed or exempted. <input checked="" type="checkbox"/> New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted. <input checked="" type="checkbox"/> Philippines inventory (PICCS): Not determined.
Chemical Weapons Convention List Schedule I Chemicals	<input checked="" type="checkbox"/> Not listed
Chemical Weapons Convention List Schedule II Chemicals	<input checked="" type="checkbox"/> Not listed
Chemical Weapons Convention List Schedule III Chemicals	<input checked="" type="checkbox"/> Not listed

Section 16. Other information

Label requirements ☒ MAY CAUSE EYE AND SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

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	18 April 2011	Date of previous issue	05 October 2009
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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.



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