Material Safety Data Sheet

United States English

Section 1. Chemical product and company identification

GFP-PLCd-PH domain vector 6 Mth AEL

Catalogue Number 67-6101-42

Component Number NIF1991

Material uses Industrial applications: Analytical chemistry. Research.

Product type Liquid

Validation date
Print date
11 November 2008
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 While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR

1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Emergency overview No specific hazard.

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED

INSTRUCTIONS FOR USE ARE FOLLOWED.

No known significant effects or critical hazards. Avoid prolonged contact with eyes, skin and clothing.

Potential acute health effects

EyesNo known significant effects or critical hazards.SkinNo known significant effects or critical hazards.InhalationNo known significant effects or critical hazards.IngestionNo known significant effects or critical hazards.

Potential chronic health effects

Chronic effects
 Carcinogenicity
 Mutagenicity
 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.

InhalationNo specific data.IngestionNo specific data.SkinNo specific data.EyesNo specific data.Medical conditions aggravated byNone known.

over-exposure

See toxicological information (section 11)



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3. Composition/information on ingredients

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4. First aid measures

In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if irritation Eye contact

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.

Do not ingest. Get medical attention if symptoms appear. Ingestion

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training.

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

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding Personal precautions

areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled

material. Put on appropriate personal protective equipment (see section 8).

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform **Environmental precautions**

the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, Methods for cleaning up

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. Note: see section 1 for emergency contact information

and section 13 for waste disposal.

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or Small spill

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

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be Handling

prohibited in areas where this material is handled, stored and processed. Workers should wash hands

and face before eating, drinking and smoking.

Store in accordance with local regulations. Store in original container protected from direct sunlight in a Storage

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

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.

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.

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and Hygiene measures

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

procedures

Engineering measures



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Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk Respiratory

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.

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times Hands

when handling chemical products if a risk assessment indicates this is necessary.

Safety eyewear complying with an approved standard should be used when a risk assessment indicates Eyes

this is necessary to avoid exposure to liquid splashes, mists or dusts.

Personal protective equipment for the body should be selected based on the task being performed and the Skin

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

Liquid. Physical state Colorless Color Odorless Odor 0% (v/v) Volatility VOC 0 (g/I).

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

Section 10. Stability and reactivity

The product is stable. No specific data. Materials to avoid

Under normal conditions of storage and use, hazardous polymerization will not occur. Hazardous polymerization

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

Section 12. Ecological information

No known significant effects or critical hazards. **Environmental effects**

Aquatic ecotoxicity

Not available Conclusion/Summary

Biodegradability

Not available. Conclusion/Summary

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.

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

HCS Classification

Not regulated. United States inventory (TSCA 8b): All components are listed or exempted. U.S. Federal regulations

> 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: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: 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.

State regulations

Connecticut Carcinogen Reporting: None of the components are listed. Connecticut Hazardous Material Survey: None of the components are listed.

Florida substances: None of the components are listed. Illinois Chemical Safety Act: None of the components are listed.

 $\textbf{Illinois Toxic Substances Disclosure to Employee Act:} \ \ \textbf{None of the components are listed}.$

Louisiana Reporting: None of the components are listed. Louisiana Spill: None of the components are listed. Massachusetts Spill: None of the components are listed. Massachusetts Substances: None of the components are listed. Michigan Critical Material: None of the components are listed. Minnesota Hazardous Substances: None of the components are listed. New Jersey Hazardous Substances: None of the components are listed.

New Jersey Spill: None of the components are listed.

New Jersey Toxic Catastrophe Prevention Act: None of the components are listed. New York Acutely Hazardous Substances: None of the components are listed. $\textbf{New York Toxic Chemical Release Reporting:} \ \textbf{None of the components are listed.}$ Pennsylvania RTK Hazardous Substances: None of the components are listed. Rhode Island Hazardous Substances: None of the components are listed.

Ingredient name	<u>Cancer</u>	<u>Reproductive</u>	No significant risk level	Maximum acceptable dosage level
Glycine, N,N'-1,2-ethanedlylbis[N- (carboxymethyl), disodium salt, dihydrate	No.	No.	No.	No.

United States inventory (TSCA 8b)

All components are listed or exempted.

EU regulations

Risk phrases This product is not classified according to EU legislation.

International regulations

International lists Australia inventory (AICS): All components are listed or exempted.

China inventory (IECSC): All components are listed or exempted. Japan inventory (ENCS): All components are listed or exempted.

Japan inventory (ISHL): Not determined.

Korea inventory (KECI): All components are listed or exempted.

New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.

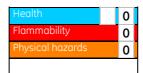
Philippines inventory (PICCS): All components are listed or exempted.

Section 16. Other information

Label requirements

NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.



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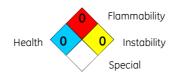
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The customer is responsible for determining the PPE code for this material.

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





Indicates information that has changed from previously issued version.

<u>History</u>

Date of printing11 November 2008Date of previous issueNo previous validation

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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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