


## SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - Europe

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

|                               |   |   |
|-------------------------------|---|---|
| Product name                  | <b>Reaction Buffer; part of 'AlkPhos Direct™ Labeling and Detection System with ECF™, For 2500 cm<sup>2</sup> membrane'</b> |   |
| Catalogue Number              | RPN3692   | <br>9 0 R P N 3 6 9 2 |
| Component Number              | NIF1551   |   |
| Product description           |   |   |
| Product type                  |   |   |
| Other means of identification | Not available.  |   |

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

#### 1.3 Details of the supplier of the safety data sheet

|  |  |  |
|--|--|--|
| <u>Supplier</u>  | GE Healthcare UK Ltd<br>Amersham Place<br>Little Chalfont<br>Buckinghamshire HP7 9NA<br>England<br>+44 0870 606 1921 | <b>Hours of operation</b><br>08.30 - 17.00 |
| <b>Person who prepared the MSDS:</b> msdslifesciences@ge.com |  |  |

|               |   |  |
|---------------|---|--|
| <b>Europe</b> | GE Healthcare Bio-Sciences GmbH<br>Munzinger Strasse 5<br>D-79111 Freiburg<br>Germany / Deutschland | <b>1.4 Emergency telephone number</b><br>+49 0761 4543 0 |
|---------------|---|--|

#### National advisory body/Poison Centre

|               |   |
|---------------|---|
| <b>Europe</b> | <a href="http://www.who.int/ipcs/poisons/centre/directory/euro/en/">http://www.who.int/ipcs/poisons/centre/directory/euro/en/</a> |
|---------------|---|

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Product definition

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

#### 2.2 Label elements

|                                    |                 |
|------------------------------------|-----------------|
| <b>Supplemental label elements</b> | Not applicable. |
|------------------------------------|-----------------|



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#### Special packaging requirements

Containers to be fitted with  
child-resistant fastenings

Not applicable.

Tactile warning of danger

Not applicable.

#### 2.3 Other hazards

Other hazards which do not result  
in classification

Not available.

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### SECTION 3: Composition/information on ingredients

#### Substance/mixture

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### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

|                            |  |
|----------------------------|--|
| Eye contact                | Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.  |
| Inhalation                 | Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if symptoms occur. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.  |
| Skin contact               | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.  |
| Ingestion                  | Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if symptoms occur. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| Protection of first-aiders | No action shall be taken involving any personal risk or without suitable training.   |

#### 4.2 Most important symptoms and effects, both acute and delayed

##### Potential acute health effects

|              |   |
|--------------|---|
| Eye contact  | No known significant effects or critical hazards. |
| Inhalation   | No known significant effects or critical hazards. |
| Skin contact | No known significant effects or critical hazards. |
| Ingestion    | No known significant effects or critical hazards. |

##### Over-exposure signs/symptoms

Eye contact  
Inhalation  
Skin contact  
Ingestion

#### 4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Specific treatments

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### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

Suitable extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media

None known.

#### 5.2 Special hazards arising from the substance or mixture



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**Hazards from the substance or mixture** No specific hazard.

**Hazardous combustion products**

### 5.3 Advice for firefighters

**Special precautions for fire-fighters** Not available.

**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.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel**

**For emergency responders**

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

### 6.3 Methods and materials for containment and cleaning up

**Small spill**

**Large spill** If emergency personnel are unavailable, contain spilt material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dyke spilt material or otherwise contain material to ensure runoff does not reach a waterway. Place spilt material in an appropriate container for disposal.

**6.4 Reference to other sections** See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

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## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 Precautions for safe handling

**Protective measures**

**Advice on general occupational hygiene**

**7.2 Conditions for safe storage, including any incompatibilities** Keep container tightly closed. Keep container in a cool, well-ventilated area.

### 7.3 Specific end use(s)

**Recommendations**

**Industrial sector specific solutions**

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## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

**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. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

#### Derived effect levels

No DELs available.

#### Predicted effect concentrations



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No PECs available.

## 8.2 Exposure controls

**Appropriate engineering controls** 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.

### Individual protection measures

#### 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.

#### Eye/face protection

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, gases or dusts.

### Skin protection

#### Hand protection

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.

#### Body protection

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.

#### Other skin protection

#### Respiratory protection

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.

#### 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

### 9.1 Information on basic physical and chemical properties

#### Appearance

**Physical state** Liquid.  
**Colour** Colourless.  
**Odour** Odourless.  
**Odour threshold** Not available.  
**pH** Not available.

#### Melting point/freezing point

#### Initial boiling point and boiling range

#### Flash point

**Evaporation rate** Not available.

#### Flammability (solid, gas)

##### Burning time

##### Burning rate

**Upper/lower flammability or explosive limits** Not applicable.

#### Vapour pressure

**Vapour density** Not available.

**Relative density** Not available.

#### Solubility(ies)

**Partition coefficient: n-octanol/water** Not available.

#### Auto-ignition temperature

#### Decomposition temperature

#### Viscosity

#### Explosive properties

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.



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|                      |                |
|----------------------|----------------|
| Oxidising properties | Not available. |
|----------------------|----------------|

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## 9.2 Other information

No additional information.

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

### 10.2 Chemical stability

### 10.3 Possibility of hazardous reactions

### 10.4 Conditions to avoid

### 10.5 Incompatible materials

### 10.6 Hazardous decomposition products

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

|                    |                |
|--------------------|----------------|
| Conclusion/Summary | Not available. |
|--------------------|----------------|

#### Irritation/Corrosion

|                    |                |
|--------------------|----------------|
| Conclusion/Summary | Not available. |
|--------------------|----------------|

#### Sensitiser

|                    |                |
|--------------------|----------------|
| Conclusion/Summary | Not available. |
|--------------------|----------------|

#### Mutagenicity

|                    |  |
|--------------------|--|
| Conclusion/Summary |  |
|--------------------|--|

#### Carcinogenicity

|                    |                |
|--------------------|----------------|
| Conclusion/Summary | Not available. |
|--------------------|----------------|

#### Reproductive toxicity

|                    |  |
|--------------------|--|
| Conclusion/Summary |  |
|--------------------|--|

#### Teratogenicity

|                    |  |
|--------------------|--|
| Conclusion/Summary |  |
|--------------------|--|

Information on the likely routes of exposure

#### Potential acute health effects

|              |   |
|--------------|---|
| Inhalation   | No known significant effects or critical hazards. |
| Ingestion    | No known significant effects or critical hazards. |
| Skin contact | No known significant effects or critical hazards. |
| Eye contact  | No known significant effects or critical hazards. |

#### Symptoms related to the physical, chemical and toxicological characteristics

|              |
|--------------|
| Inhalation   |
| Ingestion    |
| Skin contact |
| Eye contact  |

#### Delayed and immediate effects and also chronic effects from short and long term exposure

##### Short term exposure

Potential immediate effects

Potential delayed effects

##### Long term exposure

Potential immediate effects



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**Potential delayed effects**

**Potential chronic health effects**

Not available.

**Conclusion/Summary**

**General**

**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**

**Fertility effects**

**Other information**

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## SECTION 12: Ecological information

### 12.1 Toxicity

**Conclusion/Summary**

### 12.2 Persistence and degradability

**Conclusion/Summary** Not available.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** Not available.  
)

**Mobility** Not available.

### 12.5 Results of PBT and vPvB assessment

**PBT**

**vPvB**

### 12.6 Other adverse effects

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## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods

**Product**

**Methods of disposal** The generation of waste should be avoided or minimised wherever possible. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. 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.

**Hazardous waste** Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

**Packaging**

**Methods of disposal**

**Special precautions**

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## SECTION 14: Transport information



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|                                   | ADR/RID        | ADN/ADNR       | IMDG           | IATA           |
|-----------------------------------|----------------|----------------|----------------|----------------|
| 14.1 UN number                    | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| 14.2 UN proper shipping name      | -              | -              | -              | -              |
| 14.3 Transport hazard class(es)   |                |                |                |                |
| 14.4 Packing group                | -              |                | -              | -              |
| 14.5 Environmental hazards        |                |                |                |                |
| 14.6 Special precautions for user |                |                |                |                |
| Additional information            | -              | -              | -              | -              |

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Other EU regulations

Europe inventory

Aerosol dispensers

### 15.2 Chemical Safety Assessment

## SECTION 16: Other information

Indicates information that has changed from previously issued version.

### Abbreviations and acronyms

ATE = Acute Toxicity Estimate  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
DNEL = Derived No Effect Level  
EUH statement = CLP-specific Hazard statement  
PNEC = Predicted No Effect Concentration  
RRN = REACH Registration Number

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

| Classification  | Justification |
|-----------------|---------------|
| Not classified. |               |

Full text of abbreviated H statements Not applicable.

Full text of classifications [CLP/GHS] Not applicable.



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|   |                        |
|---|------------------------|
| <b>Full text of abbreviated R phrases</b>         | Not applicable.        |
| <b>Full text of classifications<br/>[DSD/DPD]</b> | Not applicable.        |
| <b>Date of printing</b>                           | 18 April 2011          |
| <b>Date of issue/ Date of revision</b>            | 18 April 2011          |
| <b>Date of previous issue</b>                     | No previous validation |
| <b>Version</b>                                    | 1                      |

**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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