

Material Safety Data Sheet

United States
English

Section 1. Chemical product and company identification

Product name KAc buffer; part of 'MicroCal™ VP-DSC Test Kit (RNase)'

Catalogue Number KIT100010



Product type Liquid.
Validation date 17 May 2011
Print date 17 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 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

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

Routes of entry Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

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|-------------------|---|
| 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

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| Chronic effects | No known significant effects or critical hazards. |
| 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. |

Over-exposure signs/symptoms

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| 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)



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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

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| 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 if symptoms occur. |
| 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. |
| Notes to physician | No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |

Section 5. Fire-fighting measures

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| 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. |
| Hazardous combustion products | No specific data. |
| 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

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| 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. 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. 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. 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

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| 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. |
| Storage | Store between the following temperatures: -40 to -20°C (-40 to -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

Consult local authorities for acceptable exposure limits.

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| Recommended monitoring procedures | Product does not contain relevant quantities of materials with exposure values that have to be monitored. |
| 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. |



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| 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

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| Physical state | Liquid. |
| Color | Colorless. |
| Odor | Odorless. |
| pH | 5.5 |
| Boiling/condensation point | 100°C (212°F) |
| Melting/freezing point | 0°C (32°F) |
| 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

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| Stability | The product is stable. |
| Conditions to avoid | No specific data. |
| Materials to avoid | No specific data. |
| Hazardous decomposition products | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| 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

Sensitizer

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| Conclusion/Summary | Not available. |
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Section 12. Ecological information

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| Environmental effects | No known significant effects or critical hazards. |
| <u>Aquatic ecotoxicity</u> | |
| Conclusion/Summary | Not available. |
| <u>Biodegradability</u> | |
| Conclusion/Summary | Not available. |
| Other adverse effects | No known significant effects or critical hazards. |

Section 13. Disposal considerations

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| 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. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. |
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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

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| HCS Classification | Not regulated. |
| U.S. Federal regulations | <p>TSCA 8(a) IUR Exempt/Partial exemption: Not determined</p> <p>United States inventory (TSCA 8b): All components are listed or exempted.</p> <p>SARA 302/304/311/312 extremely hazardous substances: No products were found.</p> <p>SARA 302/304 emergency planning and notification: No products were found.</p> <p>SARA 302/304/311/312 hazardous chemicals: No products were found.</p> <p>SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.</p> |

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| Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) | Not listed |
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| Clean Air Act Section 602 Class I Substances | Not listed |
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| Clean Air Act Section 602 Class II Substances | Not listed |
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| DEA List I Chemicals (Precursor Chemicals) | Not listed |
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| DEA List II Chemicals (Essential Chemicals) | Not listed |
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State regulations

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| Massachusetts | None of the components are listed. |
| New York | None of the components are listed. |
| New Jersey | None of the components are listed. |
| Pennsylvania | None of the components are listed. |

California Prop. 65

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| United States inventory (TSCA 8b) | All components are listed or exempted. |
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International regulations

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| International lists | <p>Australia inventory (AICS): All components are listed or exempted.</p> <p>China inventory (IECSC): All components are listed or exempted.</p> <p>Japan inventory: All components are listed or exempted.</p> <p>Korea inventory: All components are listed or exempted.</p> <p>New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.</p> <p>Philippines inventory (PICCS): All components are listed or exempted.</p> |
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| Chemical Weapons Convention List Schedule I Chemicals | Not listed |
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| Chemical Weapons Convention List Schedule II Chemicals | Not listed |
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| Chemical Weapons Convention List Schedule III Chemicals | Not listed |
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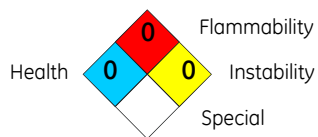
Section 16. Other information

Label requirements

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

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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| Date of printing | 17 May 2011 | Date of previous issue | 12 May 2011 |
| Date of issue | 17 May 2011 | Version | 3 |

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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