1. Identification

Product identifier: PAXgene® Blood ccfDNA Tube RUO

Other means of identification
- Product code: 768115
- Recommended use: Blood Collection Tube.
- Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Supplier
- Company name: Becton Dickinson UK Ltd.
- Address: The Danby Building, Edmund Halley Rd, Oxford OX4 4DQ, United Kingdom
- Telephone: UK: +44 (0) 1752 701281, USA: 800-631-0174
- E-mail: pas_tech_services@bd.com

2. Hazard(s) identification

Physical hazards: Not classified.
Health hazards: Not classified.
OSHA defined hazards: Not classified.

Label elements
- Hazard symbol: None.
- Signal word: None.
- Hazard statement: The mixture does not meet the criteria for classification.

Precautionary statement
- Prevention: Observe good industrial hygiene practices.
- Response: Wash hands after handling.
- Storage: Store away from incompatible materials.
- Disposal: Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC): None known.

Supplemental information: None.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proprietary</td>
<td>Proprietary</td>
<td>Proprietary</td>
</tr>
<tr>
<td>Proprietary</td>
<td>Proprietary</td>
<td>Proprietary</td>
</tr>
</tbody>
</table>

Composition comments: All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Components not listed are either non-hazardous or are below reportable limits.

4. First-aid measures

Inhalation: Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact: Wash skin with soap and water. Get medical attention if irritation persists after washing.
Eye contact: Flush eyes with water as a precaution. If irritation occurs, get medical assistance.
Ingestion: Rinse mouth. Get medical attention if any discomfort occurs.
Most important symptoms/effects, acute and delayed
Indication of immediate medical attention and special treatment needed

Direct contact with eyes may cause temporary irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media
Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media
None known.

Specific hazards arising from the chemical
By heating and fire, harmful vapors/gases may be formed.

Special protective equipment and precautions for firefighters
Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Fire fighting equipment/instructions
Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards
No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Avoid contact with eyes and prolonged skin contact. See Section 8 of the SDS for Personal Protective Equipment.

Methods and materials for containment and cleaning up
Wipe up spilled material and place in a suitable container for disposal. Following product recovery, flush area with water. For waste disposal, see Section 13 of the SDS.

Environmental precautions
Environmental manager must be informed of all major spillages.

7. Handling and storage

Precautions for safe handling
Avoid contact with eyes and prolonged skin contact. Observe good laboratory hygiene practices.

Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well-ventilated place. Keep container closed. Store away from incompatible materials.

8. Exposure controls/personal protection

Occupational exposure limits
US. Workplace Environmental Exposure Level (WEEL) Guides

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proprietary (CAS Proprietary)</td>
<td>TWA</td>
<td>10 mg/m3</td>
<td>Particulate.</td>
</tr>
</tbody>
</table>

Biological limit values
No biological exposure limits noted for the ingredient(s).

Exposure guidelines
No exposure limits noted for ingredient(s).

Appropriate engineering controls
No particular ventilation requirements.

Individual protection measures, such as personal protective equipment

<table>
<thead>
<tr>
<th>Eye/face protection</th>
<th>Risk of contact: Wear approved safety goggles.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin protection</td>
<td>For prolonged or repeated skin contact use suitable protective gloves. Nitrile gloves are recommended. Suitable gloves can be recommended by the glove supplier.</td>
</tr>
<tr>
<td>Hand protection</td>
<td></td>
</tr>
<tr>
<td>Skin protection</td>
<td>No protection is ordinarily required under normal conditions of use.</td>
</tr>
<tr>
<td>Other</td>
<td>Under normal conditions, respirator is not normally required.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>None.</td>
</tr>
<tr>
<td>Thermal hazards</td>
<td></td>
</tr>
<tr>
<td>General hygiene considerations</td>
<td>Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.</td>
</tr>
</tbody>
</table>

9. Physical and chemical properties

Appearance

PAXgene® Blood ccfDNA Tube RUO

930610 Version #: 02 Revision date: 30-October-2015 Issue date: 29-October-2015
Physical state: Liquid.
Form: Liquid.
Color: Not available.
Odor: Not available.
Odor threshold: Not applicable.
pH: Not available.
Melting point/freezing point: Not available.
Initial boiling point and boiling range: Not available.
Flash point: Not applicable.
Evaporation rate: Not available.
Flammability (solid, gas): Not applicable.
Upper/lower flammability or explosive limits:
   Flammability limit - lower (%): Not applicable.
   Flammability limit - upper (%): Not applicable.
Vapor pressure: Not available.
Vapor density: Not available.
Relative density: Not available.
Solubility(ies):
   Solubility (water): Completely soluble in water.
Partition coefficient (n-octanol/water): No data available.
Auto-ignition temperature: Not applicable.
Decomposition temperature: Not available.
Viscosity: Not available.
Other information:
   Explosive properties: Not explosive.
   Oxidizing properties: Not oxidizing.

10. Stability and reactivity
Reactivity: The product is stable and non reactive under normal conditions of use, storage and transport.
Chemical stability: Stable at normal conditions.
Possibility of hazardous reactions: Will not occur.
Conditions to avoid: Contact with incompatible materials.
Incompatible materials: Strong oxidizing agents.
Hazardous decomposition products: Thermal decomposition of this product can generate carbon monoxide, carbon dioxide and nitrogen oxides.

11. Toxicological information
Information on likely routes of exposure:
   Inhalation: Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
   Skin contact: Prolonged contact may cause dryness of the skin.
   Eye contact: Direct contact with eyes may cause temporary irritation.
   Ingestion: Ingestion may cause irritation and malaise.
   Symptoms related to the physical, chemical and toxicological characteristics:
   Direct contact with eyes may cause temporary irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects:
   Acute toxicity: Not expected to be acutely toxic.
   Skin corrosion/irritation: Due to lack of data the classification is not possible.
Due to lack of data the classification is not possible.

Serious eye damage/eye irritation

Respiratory or skin sensitization
  Respiratory sensitization
  Skin sensitization
  Germ cell mutagenicity
  Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity
  Not listed.

NTP Report on Carcinogens
  Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
  Not regulated.

Reproductive toxicity
  Due to lack of data the classification is not possible.

Specific target organ toxicity - single exposure
  Due to lack of data the classification is not possible.

Specific target organ toxicity - repeated exposure
  Due to lack of data the classification is not possible.

Aspiration hazard
  Based on available data, the classification criteria are not met.

Chronic effects
  No specific chronic health impact noted.

Further information
  No additional adverse health effects noted.

12. Ecological information

Ecotoxicity
  The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability
  No data available.

Bioaccumulative potential
  No data available.

Mobility in soil
  This product is water soluble and may disperse in soil.

Mobility in general
  No data available.

Other adverse effects
  No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions
  Dispose in accordance with all applicable regulations. Do not discharge into drains, water courses or onto the ground.

Hazardous waste code
  Not regulated.

Waste from residues / unused products
  Dispose of waste and residues in accordance with local authority requirements.

Contaminated packaging
  Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT
  Not regulated as dangerous goods.

IATA
  Not regulated as dangerous goods.

IMDG
  Not regulated as dangerous goods.

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

15. Regulatory information

US federal regulations
  This product is not hazardous according to OSHA 29CFR 1910.1200.
  TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
    Not regulated.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
No

SARA 313 (TRI reporting)
Not regulated.

Other federal regulations
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US. Massachusetts RTK - Substance List
Not regulated.

US. New Jersey Worker and Community Right-to-Know Act
Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law
Not listed.

US. Rhode Island RTK
Not regulated.

US. California Proposition 65
Not Listed.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 29-October-2015
Revision date 30-October-2015
Version # 02

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings
Health: 0
Flammability: 1
Physical hazard: 0

NFPA ratings

HMIS® ratings

Further information
References
ACGIH: American Conference of Governmental and Industrial Hygienists.
US. IARC Monographs on Occupational Exposures to Chemical Agents
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

Disclaimer
To the best of our knowledge, the information contained herein is accurate. However, neither BD nor any of its subsidiaries assumes any liability whatsoever for 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.

This SDS contains revisions in the following section(s):
1, 3, 9, 16.