MATERIAL SAFETY DATA SHEET According to EC Directive 91/155 EC Date: 01/08/10

1. Identification of the substance/preparation and of the company/undertaking

1.1 Product Details:

<table>
<thead>
<tr>
<th>Catalogue Number</th>
<th>Trade Name</th>
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</thead>
<tbody>
<tr>
<td>PB71.11-01</td>
<td>NGSBIO Library Quant Kit for Illumina® Lo-ROX</td>
</tr>
<tr>
<td>PB71.11-05</td>
<td>NGSBIO Library Quant Kit for Illumina® Lo-ROX</td>
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<tr>
<td>PB71.12-01</td>
<td>NGSBIO Library Quant Kit for Illumina® Hi-ROX</td>
</tr>
<tr>
<td>PB71.12-05</td>
<td>NGSBIO Library Quant Kit for Illumina® Hi-ROX</td>
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<tr>
<td>PB71.14-01</td>
<td>NGSBIO Library Quant Kit for Illumina® Separate-ROX</td>
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<tr>
<td>PB71.14-05</td>
<td>NGSBIO Library Quant Kit for Illumina® Separate-ROX</td>
</tr>
<tr>
<td>PB71.15-01</td>
<td>NGSBIO Library Quant Kit Blue for Illumina® Lo-ROX</td>
</tr>
<tr>
<td>PB71.15-05</td>
<td>NGSBIO Library Quant Kit Blue for Illumina® Lo-ROX</td>
</tr>
<tr>
<td>PB71.16-01</td>
<td>NGSBIO Library Quant Kit Blue for Illumina® Hi-ROX</td>
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<td>PB71.16-05</td>
<td>NGSBIO Library Quant Kit Blue for Illumina® Hi-ROX</td>
</tr>
<tr>
<td>PB71.17-01</td>
<td>NGSBIO Library Quant Kit Blue for Illumina® Separate ROX</td>
</tr>
<tr>
<td>PB71.17-05</td>
<td>NGSBIO Library Quant Kit Blue for Illumina® Separate ROX</td>
</tr>
<tr>
<td>PB71.22-05</td>
<td>NGSBIO DNA Standards for Illumina®</td>
</tr>
</tbody>
</table>

Component names:

- 2x qPCRBIO SyGreen Mix Lo-ROX
- 2x qPCRBIO SyGreen Mix Hi-ROX
- 2x qPCRBIO SyGreen Mix No-ROX
- 2x qPCRBIO SyGreen Blue Mix No-ROX
- 2x qPCRBIO SyGreen Blue Mix Hi-ROX
- 2x qPCRBIO SyGreen Blue Mix Lo-ROX
1.2 Company Details

Manufacturer/Supplier:

PCR Biosystems Ltd.
1st Floor
Aztec House
397-405 Archway Road
London, N6 4ER
United Kingdom

Telephone: +44 (0) 203 930 8101
Email: info@pcrbio.com

Further information obtainable from:

Technical Services
Details as above

1.3 Emergency Details

24-hour contact in case of emergency:

PCR Biosystems Ltd.
1st Floor
Aztec House
397-405 Archway Road
London, N6 4ER
United Kingdom

Telephone: +44 (0) 203 930 8101
2. Hazards identification

- Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008: The product is not classified according to the CLP regulation.
- Classification according to Directive 67/548/EEC or Directive 1999/45/EC. Void

Information concerning particular hazards for human and environment:
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

- Label elements
- Labelling according to EU guidelines:

Observe the general safety regulations when handling chemicals.

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

- Safety phrases:
35 This material and its container must be disposed of in a safe way.

- Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

3. Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:

  CAS: 67-68-5
  EINECS: 200-664-3
dimethyl sulfoxide 5-10%
  CAS: 56-81-5
  EINECS: 200-289-5
glycerol 1.0-2.5%
  Eye Irrit. 2, H319
  1.0-2.5%

- Additional information: For the wording of the listed risk phrases refer to section 16.

4. First aid measures

- Description of first aid measures
- General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: Induce vomiting and call for medical help.
- Information for doctor
- Most important symptoms and effects, both acute and delayed: No further relevant information available.
- Indication of any immediate medical attention and special treatment needed: No further relevant information available.
5. Firefighting measures

- Extinguishing media
- Suitable extinguishing agents
  CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
  - Protective equipment: No special measures required.

6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions:
  Dilute with plenty of water.
  Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  Dispose contaminated material as waste according to item 13.
- Reference to other sections
  No dangerous substances are released.
  See Section 7 for information on safe handling
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7. Handling and storage

- Handling
  - Precautions for safe handling No special measures required.
  - Information about protection against explosions and fires: No special measures required.
  - Conditions for safe storage, including any incompatibilities
  - Storage
    - Requirements to be met by storerooms and receptacles: According to product specification
    - Information about storage in one common storage facility: Not required.
    - Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8. Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
- Components with limit values that require monitoring at the workplace:
  Proprietary Reagent RF I
  WEL () Short-term value: 20 mg/m³
  Long-term value: 10 mg/m³
  56-81-5 glycerol
  WEL () Long-term value: 10 mg/m³
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment
- General protective and hygienic measures
  The usual precautionary measures should be adhered to when handling chemicals.
- Breathing equipment: Not required.
- Protection of hands: Protective gloves.
- Material of gloves: Synthetic gloves
- Penetration time of glove material: The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- Eye protection: Safety glasses

9. Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
- Appearance:
  - Form: Fluid
  - Colour: Colourless
- Odour: Odourless
- Odour threshold: Not determined.
- pH-value: Not determined.
- Change in condition
  - Melting point/Melting range: Undetermined
  - Boiling point/Boiling range: 100°C
- Flash point: > 55°C
- Flammability (solid, gaseous): Not applicable.
- Ignition temperature: 270°C
- Decomposition temperature: Not determined.
- Self igniting: Product is not self-igniting.
- Danger of explosion: Product does not present an explosion hazard.
- Explosion limits:
  - Lower: 1.8 Vol %
  - Upper: 63.0 Vol %
- Vapour pressure at 20°C: 23 hPa
- Density: Not determined
- Relative density: Not determined.
- Vapour density: Not determined.
- Evaporation rate: Not determined.
- Solubility in / Miscibility with
  - Water: Fully miscible
  - Segregation coefficient (n-octanol/water): Not determined.
- Viscosity:
  - Dynamic: Not determined.
  - Kinematic: Not determined.
- Solvent content:
  - Organic solvents: 12.0 %
  - Water: 71.3 %
  - Solids content: 16.7 %
- Other information: No further relevant information available.

10. Stability and reactivity

- Reactivity
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known
11. Toxicological information

- Information on toxicological effects
  - Acute toxicity:
    - LD/LC50 values that are relevant for classification:
      - 67-68-5 dimethyl sulfoxide
      - Oral LD50 14500 mg/kg (rat)
    - Primary irritant effect:
      - on the skin: No irritant effect.
      - on the eye: No irritating effect.
      - Sensitization: No sensitizing effects known.
  - Additional toxicological information:
    - The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
    - When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12. Ecological information

- Toxicity
  - Acquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Behaviour in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes:
    - Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
    - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
  - Other adverse effects: No further relevant information available.

13. Disposal considerations

- Waste treatment methods
  - Recommendation
    - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
    - Uncleaned packagings:
      - Recommendation: Disposal must be made according to official regulations.
      - Recommended cleansing agent: Water, if necessary with cleansing agents.

14. Transport information

- Maritime transport IMDG:
- Marine pollutant: No
15. Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- National regulations
- Technical instructions (air):
  - Class Share in %
    NK 10-20
  - Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.
  - Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.