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:

Trade Names: PCRBIO HS Taq Mix
Catalogue Numbers: PB10.22-02
                  PB10.22-10

Kit Components: PCRBIO HS Taq Mix

Trade Names: PCRBIO HS Taq Mix Red
Catalogue Numbers: PB10.23-02
                  PB10.23-10

Kit Components: PCRBIO HS Taq Mix Red

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

- Trade name PCRBIO HS Taq Mix and PCRBIO HS Taq Mix Red
- 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: None
- 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: None
· 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 selfigniting.
· 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
  - Conditions to avoid: No further relevant information available.
  - Incompatible materials: No further relevant information available.
  - Hazardous decomposition products: No dangerous decomposition products 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
- Special precautions for user: Not applicable.
- Transport/Additional information: Not dangerous according to the above specifications.
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

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.