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

1.1 Product Details:

Trade Names: PCRBIO Ultra Polymerase

Catalogue Numbers: PB10.31-05
PB10.31-20
PB10.31-40

Kit Components: PCRBIO Ultra Polymerase (5u/ul)
5x Reaction buffer

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:
2. Hazards identification

- Trade name: PCRBIO Ultra Polymerase (5u/ul)
- 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:
  Glycerol
  CAS: 56-81-5
  EINECS: 200-289-5
- 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 storerrooms 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:
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 break trough 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
  - Aquatic 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.
1. Identification of the substance/preparation and of the company/undertaking

1.1 Product Details:

Trade Names: PCRBIO Ultra Polymerase

Catalogue Numbers: PB10.31-05
PB10.31-20
PB10.31-40

Kit Components: PCRBIO Ultra Polymerase (5u/ul)
5x Reaction buffer

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:
2. Hazards identification

- Trade name: 5x Reaction buffer
- Classification of the substance or mixture: The product is not classified according to the CLP regulation.
- Classification according to Regulation (EC) No 1272/2008: Void
- 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.
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.
· 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.
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- LD/LC50 values that are relevant for classification:
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  Oral LD50 14500 mg/kg (rat)
- Primary irritant effect:
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  - 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
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