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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 Classic Taq

Catalogue Numbers: PB10.15-1

PB10.15-3 PB10.15-6

Kit Components: PCRBIO Classic Taq (5u/ul)

10x Classic Buffer



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1.2 Company Details

Manufacturer/ Supplier:
PCR Biosystems Ltd
London Bioscience Innovation Centre
2 Royal College Street
London
NW1 ONH
United Kingdom
Telephone +44 (0) 207 691 3563
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 London Bioscience Innovation Centre 2 Royal College Street London NW1 0NH United Kingdom Telephone +44 (0) 207 691 3563



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* 2 Hazards identification

- · Trade name PCRBIO Tag DNA 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.



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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:

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



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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: Colourle

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



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- · 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

 \cdot Safety, health and environmental regulations/legislation specific for the substance or mixture



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- · 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.



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1.1 Product Details:

Trade Names: PCRBIO Taq DNA Polymerase

Catalogue Numbers: PB10.11-05

PB10.11-20 PB10.11-40

Kit Components: PCRBIO Taq DNA Polymerase (5u/ul)

5x Reaction buffer



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* 2 Hazards identification

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- · Classification of the substance or mixture
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· 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.

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- · Information for doctor
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
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5 Firefighting measures

- · Extinguishing media
- · Suitable extinguishing agents



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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

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- 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 break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection: Safety glasses



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- · 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

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- · 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:



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· 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

- \cdot Safety, health and environmental regulations/legislation specific for the substance or mixture
- · National regulations



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- 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.

· Department issuing MSDS: Environmental Health and Safety.