PCRBIOSYSTEMS
simplifying research

PCR Biosystems Ltd
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MATERIAL SAFETY DATA SHEET

According to EC Regulation 1907/2006
Classification according to EC Regulation 1272/2008

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

1.1 Product Details:

Trade Names:
IsoFast Bst Polymerase (120 U/µL)

Catalogue Numbers:
PB80.14-08, PB80.14-15, PB80.14-150, PB80.14-C**x**

where **x** *is any number corresponding to a custom product on our catalogue.*

Kit Components:

10x IsoFast Buffer A	**A**
5x IsoFast Buffer B	**B**
IsoFast Bst Polymerase (120 U/µL)	**C**

1.2 Company Details

Manufacturer/Supplier:

PCR Biosystems Ltd.
1st Floor
Aztec House
397-405 Archway Road
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United Kingdom
Telephone: +44 (0) 203 930 8101
Email: info@pcrbio.com

Further information obtainable from:

Technical Services
Details as above

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1.3 Emergency Details

24-hour contact in case of emergency:

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A

2. Hazards identification

· **Kit component** 10x IsoFast Buffer A
· **Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008** This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]
· **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:** This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]
· **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:** No information available
· **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 non-hazardous additions.
· **Dangerous components:** Not applicable
· **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** Wash skin with soap and water. 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:** Treat symptomatically.
· **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**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters:** Firefighters should wear self-contained breathing apparatus and full firefighting turnout.
· **Protective equipment:** No special measures required or as above

6. Accidental release measures

· **Personal precautions, protective equipment and emergency procedures:**
Ensure adequate ventilation.
· **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers / surface or ground water.
See Section 12 for additional Ecological Information.
· **Methods and material for containment and cleaning up:**
Prevent further leakage or spillage if safe to do so. 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:** Keep container tightly closed in a dry and well-ventilated place.
· **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.
· **Risk management methods [RMM]** The information required is contained in this Safety Data Sheet.

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:** No information available.
· **Personal protective equipment**
· **General protective and hygienic measures**

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The usual precautionary measures should be adhered to when handling chemicals.
· **Breathing equipment:** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
· **Protection of hands:** Protective gloves.
· **Material of gloves** Synthetic gloves
· **Penetration time of glove material**
The exact break through time must be found out by the manufacturer of the protective gloves and must 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: No data available.
Boiling point/Boiling range: No data available.
· **Flash point:** No data available.
· **Flammability (solid, gaseous)** No data available
· **Ignition temperature:** No data available.
· **Decomposition temperature:** No data available
· **Self igniting:** Not determined.
· **Danger of explosion:** Product does not present an explosion hazard.
· **Explosion limits:** No data available
· **Vapour pressure at 20°C:** Not determined.
· **Density: No data available:** Not determined.
· **Relative density:** No data available
· **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.
· **Other information** No further relevant information available.

10. Stability and reactivity

· **Reactivity:** No information available.
· **Chemical stability:** Stable under normal conditions.
· **Thermal decomposition / conditions to be avoided:** None known based on information supplied.
· **Explosion data:**
Sensitivity to mechanical impact: None.
Sensitivity to mechanical impact: None.
· **Possibility of hazardous reactions** None known based on information supplied.

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· **Conditions to avoid** None known based on information supplied.
· **Incompatible materials:** None known based on information supplied.
· **Hazardous decomposition products:** None known based on information supplied.

11. Toxicological information

11.1 Information on toxicological effects

· **Numerical measures of toxicity**
The following values are calculated based on chapter 3.1 of the GHS document.
ATEmix (oral): 9,942 mg/kg
ATEmix (dermal): 25,888 mg/kg

Unknown acute toxicity 10.8 % of the mixture consists of ingredient(s) of unknown toxicity.
0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
1.8 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
10.8 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
10.8 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

· **Skin corrosion/irritation:** No data available.
· **Serious eye damage/eye irritation:**
Eyes – rabbit: No data available.
· **Respiratory or skin sensitization:** No data available.
· **Germ cell mutagenicity:** No data available.
· **Carcinogenicity:**
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.
· **Reproductive toxicity:** No data available.
· **Specific target organ toxicity – single exposure:** No data available.
· **Specific target organ toxicity – repeated exposure:** No data available.
· **Aspiration hazard:** No data available.
·**Potential health effects:**
Inhalation: Specific test data for the substance or mixture is not available.
Ingestion: Specific test data for the substance or mixture is not available.
Skin May: Specific test data for the substance or mixture is not available.
Eyes: Specific test data for the substance or mixture is not available.
· **Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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.

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· **Results of PBT and vPvB assessment**
  · **PBT:** No further relevant information available.
  · **vPvB:** No further relevant information available.
· **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 packaging:**
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary, with cleansing agents.

14. Transport information

· **IMDG:**
Marine pollutant: Not applicable
UN number: Not regulated.
Proper shipping name: Not regulated.
Packing group: Not regulated.
Special Provisions: Not regulated.
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.

· **RID:**
· **UN/ID No:** Not regulated.
Proper shipping name: Not regulated.
Transport hazard class(es): Not regulated.
Packing group: Not regulated.
Environmental hazard: Not applicable.
Special Provisions: None

· **ADR:**
UN number: Not regulated.
Proper shipping name: Not regulated.
Transport hazard class(es): Not regulated.
Packing group: Not regulated.
Environmental hazard: Not applicable.
Special Provisions: None

· **IATA:**
UN number: Not regulated.
Proper shipping name: Not regulated.
Transport hazard class(es): Not regulated.
Packing group: Not regulated.
Environmental hazard: Not applicable.
Special Provisions: None

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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.
· **European Union**
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

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. Since conditions of use of the product are not under the control of PCR Biosystems Ltd., it is the duty of the buyer/user to determine the necessary conditions for the safe use of the product. PCR Biosystems Ltd. will not be liable for any damages resulting from handling or contact with the product.

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B

2. Hazards identification

· **Kit component** 5x IsoFast Buffer B
· **Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008** This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]
· **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:** This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]
· **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:** No information available
· **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 non-hazardous additions.
· **Dangerous components:** Not applicable
· **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** Wash skin with soap and water. 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:** Treat symptomatically.
· **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**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters:** Firefighters should wear self-contained breathing apparatus and full firefighting turnout.
· **Protective equipment:** No special measures required or as above

6. Accidental release measures

· **Personal precautions, protective equipment and emergency procedures:**
Ensure adequate ventilation.
· **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers / surface or ground water.
See Section 12 for additional Ecological Information.
· **Methods and material for containment and cleaning up:**
Prevent further leakage or spillage if safe to do so. 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:** Keep container tightly closed in a dry and well-ventilated place.
· **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.
· **Risk management methods [RMM]** The information required is contained in this Safety Data Sheet.

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:** No information available.
· **Personal protective equipment**
· **General protective and hygienic measures**

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The usual precautionary measures should be adhered to when handling chemicals.
· **Breathing equipment:** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
· **Protection of hands:** Protective gloves.
· **Material of gloves** Synthetic gloves
· **Penetration time of glove material**
The exact break through time must be found out by the manufacturer of the protective gloves and must be observed.
· **Eye protection:** Safety glasses

9. Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**
Form: Fluid
Colour: Light yellow
· **Odour:** Odourless
· **Odour threshold:** Not determined.
· **pH-value:** Not determined.
· **Change in condition.**
Melting point/Melting range: No data available.
Boiling point/Boiling range: No data available.
· **Flash point:** No data available.
· **Flammability (solid, gaseous)** No data available
· **Ignition temperature:** No data available.
· **Decomposition temperature:** No data available
· **Self igniting:** Not determined.
· **Danger of explosion:** Product does not present an explosion hazard.
· **Explosion limits:** No data available
· **Vapour pressure at 20°C:** Not determined.
· **Density: No data available:** Not determined.
· **Relative density:** No data available
· **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.
· **Other information** No further relevant information available.

10. Stability and reactivity

· **Reactivity:** No information available.
· **Chemical stability:** Stable under normal conditions.
· **Thermal decomposition / conditions to be avoided:** None known based on information supplied.
· **Explosion data:**
Sensitivity to mechanical impact: None.
Sensitivity to mechanical impact: None.
· **Possibility of hazardous reactions** None known based on information supplied.

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· **Conditions to avoid** None known based on information supplied.
· **Incompatible materials:** None known based on information supplied.
· **Hazardous decomposition products:** None known based on information supplied.

11. Toxicological information

11.1 Information on toxicological effects

· **Numerical measures of toxicity**
The following values are calculated based on chapter 3.1 of the GHS document.
ATEmix (oral): 23,901 mg/kg

Unknown acute toxicity 58.6 % of the mixture consists of ingredient(s) of unknown toxicity.
0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
58.6 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
58.6 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
58.6 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

· **Skin corrosion/irritation:** No data available.
· **Serious eye damage/eye irritation:**
Eyes – rabbit: No data available.
· **Respiratory or skin sensitization:** No data available.
· **Germ cell mutagenicity:** No data available.
· **Carcinogenicity:**
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.
· **Reproductive toxicity:** No data available.
· **Specific target organ toxicity – single exposure:** No data available.
· **Specific target organ toxicity – repeated exposure:** No data available.
· **Aspiration hazard:** No data available.
·**Potential health effects:**
Inhalation: Specific test data for the substance or mixture is not available.
Ingestion: Specific test data for the substance or mixture is not available.
Skin May: Specific test data for the substance or mixture is not available.
Eyes: Specific test data for the substance or mixture is not available.
· **Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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**

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· **PBT:** No further relevant information available.
· **vPvB:** No further relevant information available.
· **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 packaging:**
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary, with cleansing agents.

14. Transport information

· **IMDG:**
Marine pollutant: Not applicable
UN number: Not regulated.
Proper shipping name: Not regulated.
Packing group: Not regulated.
Special Provisions: Not regulated.
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.

· **RID:**
· **UN/ID No:** Not regulated.
Proper shipping name: Not regulated.
Transport hazard class(es): Not regulated.
Packing group: Not regulated.
Environmental hazard: Not applicable.
Special Provisions: None

· **ADR:**
UN number: Not regulated.
Proper shipping name: Not regulated.
Transport hazard class(es): Not regulated.
Packing group: Not regulated.
Environmental hazard: Not applicable.
Special Provisions: None

· **IATA:**
UN number: Not regulated.
Proper shipping name: Not regulated.
Transport hazard class(es): Not regulated.
Packing group: Not regulated.
Environmental hazard: Not applicable.
Special Provisions: None

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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.
· **European Union**
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

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. Since conditions of use of the product are not under the control of PCR Biosystems Ltd., it is the duty of the buyer/user to determine the necessary conditions for the safe use of the product. PCR Biosystems Ltd. will not be liable for any damages resulting from handling or contact with the product.

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C

2. Hazards identification

· **Kit component** IsoFast Bst Polymerase (120 U/µL)
· **Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008** This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]
· **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:** This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]
· **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:** No information available
· **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 non-hazardous additions.
· **Dangerous components:** Not applicable
· **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** Wash skin with soap and water. 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:** Treat symptomatically.
· **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**
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters:** Firefighters should wear self-contained breathing apparatus and full firefighting turnout.
· **Protective equipment:** No special measures required or as above

6. Accidental release measures

· **Personal precautions, protective equipment and emergency procedures:**
Ensure adequate ventilation.
· **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers / surface or ground water.
See Section 12 for additional Ecological Information.
· **Methods and material for containment and cleaning up:**
Prevent further leakage or spillage if safe to do so. 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:** Keep container tightly closed in a dry and well-ventilated place.
· **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.
· **Risk management methods [RMM]** The information required is contained in this Safety Data Sheet.

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:** No information available.
· **Personal protective equipment**
· **General protective and hygienic measures**

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The usual precautionary measures should be adhered to when handling chemicals.
· **Breathing equipment:** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
· **Protection of hands:** Protective gloves.
· **Material of gloves** Synthetic gloves
· **Penetration time of glove material**
The exact break through time must be found out by the manufacturer of the protective gloves and must 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: No data available.
Boiling point/Boiling range: No data available.
· **Flash point:** No data available.
· **Flammability (solid, gaseous)** No data available
· **Ignition temperature:** No data available.
· **Decomposition temperature:** No data available
· **Self igniting:** Not determined.
· **Danger of explosion:** Product does not present an explosion hazard.
· **Explosion limits:** No data available
· **Vapour pressure at 20°C:** Not determined.
· **Density: No data available:** Not determined.
· **Relative density:** No data available
· **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.
· **Other information** No further relevant information available.

10. Stability and reactivity

· **Reactivity:** No information available.
· **Chemical stability:** Stable under normal conditions.
· **Thermal decomposition / conditions to be avoided:** None known based on information supplied.
· **Explosion data:**
Sensitivity to mechanical impact: None.
Sensitivity to mechanical impact: None.
· **Possibility of hazardous reactions** None known based on information supplied.

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· **Conditions to avoid** None known based on information supplied.
· **Incompatible materials:** None known based on information supplied.
· **Hazardous decomposition products:** None known based on information supplied.

11. Toxicological information

11.1 Information on toxicological effects

· **Numerical measures of toxicity**
The following values are calculated based on chapter 3.1 of the GHS document.
ATEmix (oral): 142,528 mg/kg
ATEmix (dermal): 31,089 mg/kg

Unknown acute toxicity 10 % of the mixture consists of ingredient(s) of unknown toxicity.
0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
0 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
10 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
10 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).

· **Skin corrosion/irritation:** No data available.
· **Serious eye damage/eye irritation:**
Eyes – rabbit: No data available.
· **Respiratory or skin sensitization:** No data available.
· **Germ cell mutagenicity:** No data available.
· **Carcinogenicity:**
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.
· **Reproductive toxicity:** No data available.
· **Specific target organ toxicity – single exposure:** No data available.
· **Specific target organ toxicity – repeated exposure:** No data available.
· **Aspiration hazard:** No data available.
·**Potential health effects:**
Inhalation: Specific test data for the substance or mixture is not available.
Ingestion: Specific test data for the substance or mixture is not available.
Skin May: Specific test data for the substance or mixture is not available.
Eyes: Specific test data for the substance or mixture is not available.
· **Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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.

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· **Results of PBT and vPvB assessment**
  · **PBT:** No further relevant information available.
  · **vPvB:** No further relevant information available.
· **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 packaging:**
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary, with cleansing agents.

14. Transport information

· **IMDG:**
Marine pollutant: Not applicable
UN number: Not regulated.
Proper shipping name: Not regulated.
Packing group: Not regulated.
Special Provisions: Not regulated.
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.

· **RID:**
· **UN/ID No:** Not regulated.
Proper shipping name: Not regulated.
Transport hazard class(es): Not regulated.
Packing group: Not regulated.
Environmental hazard: Not applicable.
Special Provisions: None

· **ADR:**
UN number: Not regulated.
Proper shipping name: Not regulated.
Transport hazard class(es): Not regulated.
Packing group: Not regulated.
Environmental hazard: Not applicable.
Special Provisions: None

· **IATA:**
UN number: Not regulated.
Proper shipping name: Not regulated.
Transport hazard class(es): Not regulated.
Packing group: Not regulated.
Environmental hazard: Not applicable.
Special Provisions: None

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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.
· **European Union**
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

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. Since conditions of use of the product are not under the control of PCR Biosystems Ltd., it is the duty of the buyer/user to determine the necessary conditions for the safe use of the product. PCR Biosystems Ltd. will not be liable for any damages resulting from handling or contact with the product.