SDS AHD 5091AHD

Component ID	Description
5091AHDCO	AHD conjugate
5091AHDS16	AHD-NP standards
5091AHDS	AHD Standard
5000PBS15	Dilution buffer
5161MGSDB	Sample dilution buffer
5000RB	Rinsing buffer
5000TMB	TMB substrate solution
5000SS	Stop solution

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

1.1. Product identifier

Product name	AHD conjugate
Product code	5091AHDCO

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory use

1.3. Details of the supplier of the safety data sheet

Company	R-Biopharm Nederland B.V. Beijerinckweg 18 6827 BN Arnhem Netherlands
Telephone	+31 (0)26-363-0364
Fax	+31 (0)26-364-5111
E-mail address	info@r-biopharm.nl

1.4. Emergency telephone number

Emergency phone #	Please look for the emergency telephone number in your country before using this substance or mixture.

2. Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No 1272/2008)

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

2.2. Label elements

Labelling (Regulation (EC) No 1272/2008)

Not applicable.

2.3. Other hazards

Not applicable.

3. Composition/information on ingredients

3.1. Dangerous ingredients

Mixture of substances with none hazardous additions.

For the full text of the H-Statements mentioned in this Section, see Section 16.
For more detailed information on health effects and symptoms, see Section 11.

4. First aid measures

4.1. Description of first aid measures

General advice	First aider needs to protect himself. Consult a physician. Show this safety data sheet to the doctor in attendance.
Eye contact	Rinse out with plenty of water. Get medical attention immediately if symptoms occur.
Skin contact	Wash off with plenty of water. Remove contaminated clothing. Consult a physician.

Ingestion	Rinse mouth with water. Do NOT induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention.
Inhalation	Move person into fresh air. If not breathing, give artificial respiration. Immediately call in a physician.

4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use water, CO2, dry chemical or foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which must not be used for safety reasons

None known based on information supplied.

5.2. Special hazards arising from the substance or mixture

None known.

5.3. Advise for firefighters

Wear self-contained breathing apparatus and protective suit.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2. Environmental precautions

Should not be released into the environment. Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

6.4. Reference to other sections

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

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.
For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Store at 2°C to 8°C (36°F to 46°F).

7.3. Specific end uses
No data available.

8. Exposure controls/personal protection
8.1. Control parameters
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2. Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Tightly fitting safety glasses

Skin/body protection
Protective/ impervious long sleeved clothing

Hand protection
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the related standard EN374.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the substance/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material:
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has to be checked prior to the application.

Penetration time:
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hygiene measures
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands after working with substance. Do not inhale substance

Environmental Exposure controls
Should not be released into the environment. Do not let product enter drains.

9. Physical and chemical properties
9.1. Information on basic physical and chemical properties
Appearance	Form: liquid

Color	Slightly brown
Odor	no data available
Odor threshold	no data available
pH	6.2 – 7.2
Melting point/ freezing point	0°C (32°F)
Initial boiling point/ boiling range	100°C (212°F)
Flash point	not applicable
Evaporation rate	no data available
Flammability (solid, gas)	not applicable
Flammability limits in air	no data available
Vapor pressure	no data available
Relative density	no data available
Water solubility	Fully miscible
Partition coefficient: n-octanol/water	no data available
Autoignition temperature	Product is not self-igniting
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	Product does not contain an explosion hazard
Oxidizing properties	no data available

9.2. Other safety information

No data available.

10. Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

No further relevant information available.

10.6. Hazardous decomposition products

In the event of fire: See chapter 5.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity
No data available.

Skin corrosion/irritation
No data available.

Serious eye damage/irritation
No data available.

Respiratory or skin sensitization
No data available.

Germ cell mutagenicity
No data available.

Carcinogenity
Contains no ingredient listed as a carcinogen

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.

12. Ecological information

12.1. Toxicity
No data available.

12.2. Persistence and degradability
No data available.

12.3. Bioaccumulative potential
No data available.

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
No data available.

12.6. Other adverse effects
No data available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products	Dispose of as hazardous waste in compliance with local and national regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

14.1. UN/ID No

ADR/RID: - IMDG: - IATA: -

14.2. UN proper shipping name

ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

14.3. Transport hazard class

ADR/RID: - IMDG: - IATA: -

14.4. Packaging group

ADR/RID: - IMDG: - IATA: -

14.5. Environmental hazards

ADR/RID: - IMDG Marine pollutant: - IATA: -

14.6. Special precautions for user

Not applicable.

15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1. Safety, health and environmental regulations/legislation specific for the substance

No information available.

15.2. Chemical safety assessment

No information available.

16. Other information

Full text of H-statements referred to under Sections 2 and 3

Not applicable

Revision note: New format.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this safety data sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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

1.1. Product identifier

Product name	NP-AHD standard set
Product code	5091AHDS16

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory use

1.3. Details of the supplier of the safety data sheet

Company	R-Biopharm Nederland B.V. Beijerinckweg 18 6827 BN Arnhem Netherlands
Telephone	+31 (0)26-363-0364
Fax	+31 (0)26-364-5111
E-mail address	info@r-biopharm.nl

1.4. Emergency telephone number

Emergency phone #	Please look for the emergency telephone number in your country before using this substance or mixture.

2. Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No 1272/2008)

Flammable liquid, 3, H226

STOT-SE, 1, H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. Label elements

Labelling (Regulation (EC) No 1272/2008)

Pictogram



GHS02 *GHS08*

Signal word: Danger

Hazard statement(s)

H226	Flammable liquid and vapor.
H370	Causes damage to organs.

Precautionary statements

P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P280	Wear protective gloves/ protective clothing.
P308 + P310	IF exposed or concerned: immediately call a POISON CENTRE or doctor/physician.

Supplemental Hazard Statements: None

2.3. Other hazards

None

3. Composition/information on ingredients

3.1. Dangerous ingredients

Chemical name	EC-No	CAS-No	Weight (%)	Classification (1272/2008/EC)	
Methanol	200-659-6	67-56-1	10%	Flam. Liq. 2 H225 Acute Tox. 3 H301 Acute Tox. 3 H331 Acute Tox. 3 H311 STOT SE 1 H370	

For the full text of the H-Statements mentioned in this Section, see Section 16.
For more detailed information on health effects and symptoms, see Section 11.

4. First aid measures

4.1. Description of first aid measures

General advice — First aider needs to protect himself. Consult a physician. Show this safety data sheet to the doctor in attendance.

Eye contact — Rinse out with plenty of water. Get medical attention immediately if symptoms occur.

Skin contact — Wash off with plenty of water. Remove contaminated clothing. Consult a physician.

Ingestion — Rinse mouth with water. Do NOT induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention (mention methanol ingestion).

Inhalation — Move person into fresh air. If not breathing, give artificial respiration. Immediately call in a physician.

4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician — Treat symptomatically.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Use water, CO2, dry chemical or foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which must not be used for safety reasons
None known based on information supplied.

5.2. Special hazards arising from the substance or mixture

Development of hazardous combustion gases or vapors possible in the event of fire.
Fire may cause evolution of:
Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Sulphur oxides, Mercury vapors.

5.3. Advise for firefighters

Wear self-contained breathing apparatus and protective suit.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Use personal protective equipment. Avoid breathing vapors, mist or gas. Keep away from heat and sources of ignition. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2. Environmental precautions

Should not be released into the environment. Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up

Cover drains. Collect, bind and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material. Dispose of properly. Clean up affected area.

6.4. Reference to other sections

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

7.1. Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Handle in accordance with good industrial hygiene and safety practice. Observe label precautions. Keep away from open flames, hot surfaces and sources of ignition.
Avoid formation of aerosols. Avoid exposure - obtain special instructions before use.
For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Store at +2°C to +8°C (36°F to 46°F).

7.3. Specific end uses

No data available.

8. Exposure controls/personal protection

8.1. Control parameters

Chemical name	Type	Value*
Methanol (CAS 67-56-1)	TWA 8hr	133 mg/m^3
	STEL	325 mg/m^3

*(External MSDS)

8.2. Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety glasses

Skin/body protection

Protective/ impervious long sleeved clothing

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the related standard EN374.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the substance/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has to be checked prior to the application.

Penetration time:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands after working with substance. Do not inhale substance.

Environmental Exposure controls

Should not be released into the environment. Do not let product enter drains.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Form: liquid
Color	Colorless
Odor	no data available
Odor threshold	no data available
pH	7.4 ± 0.05
Melting point/ freezing point	no data available
Initial boiling point/ boiling range	no data available
Flash point	no data available
Evaporation rate	no data available
Flammability (solid, gas)	not applicable
Flammability limits in air	no data available
Vapor pressure	no data available
Relative density	no data available
Water solubility	Fully miscible
Partition coefficient: n-octanol/water	no data available

Autoignition temperature	no data available
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	Product does not contain an explosion hazard
Oxidizing properties	no data available

9.2. Other safety information
No data available.

10. Stability and reactivity

10.1. Reactivity
No data available.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No data available.

10.4. Conditions to avoid
Heat, flames and sparks.

10.5. Incompatible materials
No data available.

10.6. Hazardous decomposition products
In the event of fire: See chapter 5.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methanol	5628 mg/kg (Rat)* 1400 mg/kg (Human)*	Ca. 17100 mg/kg (Rabbit)*	4h 85.26 mg/l (Rat)*

*(External MSDS)

Skin corrosion/irritation
No data available.

Serious eye damage/irritation
No data available.

Respiratory or skin sensitization
Sensitization test: guinea pig (methanol)
Result: negative (IUCLID) (methanol)

Germ cell mutagenicity
No data available.

Carcinogenity
No data available.

Reproductive toxicity
Regarding the available data the classification criteria are not fulfilled.

Specific target organ toxicity – single exposure
Target organs: Eyes (methanol)
Causes damage to organs. (methanol)

Specific target organ toxicity – repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

12. Ecological information

12.1. Toxicity

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Methanol (CAS 67-56-1)	96h EC50 Pseudokirchneriella subcapitata (green algae): ca. 22000 mg/l* 8d IC5 Scenedesmus quadricauda (green algae): 8000 mg/l*	200h NOEC Oryzias latipes (orange-red killifish): 7900 mg/l* 96h LC50 Lepomis macrochirus (Bluegill sunfish): 15400 mg/l*	16h EC5 Pseudomonas fluorescens: 6600 mg/l*	48h EC50 Daphnia magna (Water flea): >10000 mg/l* 72h EC5 E.sulcatum: >10000 mg/l*

*(External MSDS)

12.2. Persistence and degradability

(Methanol)
Biodegradability
99%; 30d
OECD Test Guideline 301D
Readily biodegradable.

Biochemical Oxygen Demand (BOD)
600 – 1120 mg/g (5d) (IUCLID)

Chemical Oxygen Demand (COD)
1420 mg/g (IUCLID)

Theoretical Oxygen Demand (ThOD)
1500 mg/g (Lit.)

Ratio BOD/ThBOD)
BOD5 76%
Closed bottle test

12.3. Bioaccumulative potential

Chemical name	Log Pow
Methanol	-0,77

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products Dispose of as hazardous waste in compliance with local and national regulations.

Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

14.1. UN/ID No

ADR/RID: UN1992 IMDG: UN1992 IATA: UN1992

14.2. UN proper shipping name

ADR/RID: 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)
IMDG: FLAMMABLE LIQUID, TOXIC, N.O.S. solution
IATA: FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

14.3. Transport hazard class

ADR/RID: 3 (6.1) IMDG: 3 (6.1) IATA: 3 (6.1)

14.4. Packaging group

ADR/RID: II IMDG: II IATA: II

14.5. Environmental hazards

ADR/RID: - IMDG Marine pollutant: - IATA: -

14.6. Special precautions for user

No data available.

15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1. Safety, health and environmental regulations/legislation specific for the substance

No information available.

15.2. Chemical safety assessment

No information available.

16. Other information

Full text of H-statements referred to under Sections 2 and 3

H225 – Highly flammable liquid and vapor.
H226 – Flammable liquid and vapor.
H301 – Toxic if swallowed.
H311 – Toxic in contact with skin.
H331 – Toxic if inhaled.
H370 – Causes damage to organs.

Revision note: New format.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this safety data sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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

1.1. Product identifier

Product name	AHD standard 100 ng/ml
Product code	5091AHDS

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory use

1.3. Details of the supplier of the safety data sheet

Company	R-Biopharm Nederland B.V. Beijerinckweg 18 6827 BN Arnhem Netherlands
Telephone	+31 (0)26-363-0364
Fax	+31 (0)26-364-5111
E-mail address	info@r-biopharm.nl

1.4. Emergency telephone number

Emergency phone #	Please look for the emergency telephone number in your country before using this substance or mixture.

2. Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No 1272/2008)

Flammable liquid, 3, H226

STOT-SE, 1, H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. Label elements

Labelling (Regulation (EC) No 1272/2008)

Pictogram



GHS02 *GHS08*

Signal word: Danger

Hazard statement(s)

H226	Flammable liquid and vapor.
H370	Causes damage to organs.

Precautionary statements

P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P280	Wear protective gloves/ protective clothing.
P308 + P310	IF exposed or concerned: immediately call a POISON CENTRE or doctor/physician.

Supplemental Hazard Statements: None

2.3. Other hazards

None

3. Composition/information on ingredients

3.1. Dangerous ingredients

Chemical name	EC-No	CAS-No	Weight (%)	Classification (1272/2008/EC)	
Methanol	200-659-6	67-56-1	10%	Flam. Liq. 2 H225 Acute Tox. 3 H301 Acute Tox. 3 H331 Acute Tox. 3 H311 STOT SE 1 H370	

For the full text of the H-Statements mentioned in this Section, see Section 16.
For more detailed information on health effects and symptoms, see Section 11.

4. First aid measures

4.1. Description of first aid measures

General advice — First aider needs to protect himself. Consult a physician. Show this safety data sheet to the doctor in attendance.

Eye contact — Rinse out with plenty of water. Get medical attention immediately if symptoms occur.

Skin contact — Wash off with plenty of water. Remove contaminated clothing. Consult a physician.

Ingestion — Rinse mouth with water. Do NOT induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention (mention methanol ingestion).

Inhalation — Move person into fresh air. If not breathing, give artificial respiration. Immediately call in a physician.

4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician — Treat symptomatically.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Use water, CO2, dry chemical or foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which must not be used for safety reasons
None known based on information supplied.

5.2. Special hazards arising from the substance or mixture

Development of hazardous combustion gases or vapors possible in the event of fire.
Fire may cause evolution of:
Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Sulphur oxides, Mercury vapors.

5.3. Advise for firefighters

Wear self-contained breathing apparatus and protective suit.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Use personal protective equipment. Avoid breathing vapors, mist or gas. Keep away from heat and sources of ignition. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2. Environmental precautions

Should not be released into the environment. Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up

Cover drains. Collect, bind and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material. Dispose of properly. Clean up affected area.

6.4. Reference to other sections

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

7.1. Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Handle in accordance with good industrial hygiene and safety practice. Observe label precautions. Keep away from open flames, hot surfaces and sources of ignition.
Avoid formation of aerosols. Avoid exposure - obtain special instructions before use.
For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Store at +2°C to +8°C (36°F to 46°F).

7.3. Specific end uses

No data available.

8. Exposure controls/personal protection

8.1. Control parameters

Chemical name	Type	Value*
Methanol (CAS 67-56-1)	TWA 8hr	133 mg/m^3
	STEL	325 mg/m^3

*(External MSDS)

8.2. Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety glasses

Skin/body protection

Protective/ impervious long sleeved clothing

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the related standard EN374.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the substance/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has to be checked prior to the application.

Penetration time:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands after working with substance. Do not inhale substance.

Environmental Exposure controls

Should not be released into the environment. Do not let product enter drains.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Form: liquid
Color	Colorless
Odor	no data available
Odor threshold	no data available
pH	7.4 ± 0.05
Melting point/ freezing point	no data available
Initial boiling point/ boiling range	no data available
Flash point	no data available
Evaporation rate	no data available
Flammability (solid, gas)	not applicable
Flammability limits in air	no data available
Vapor pressure	no data available
Relative density	no data available
Water solubility	Fully miscible
Partition coefficient: n-octanol/water	no data available

Autoignition temperature	no data available
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	Product does not contain an explosion hazard
Oxidizing properties	no data available

9.2. Other safety information

No data available.

10. Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

In the event of fire: See chapter 5.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methanol	5628 mg/kg (Rat)* 1400 mg/kg (Human)*	Ca. 17100 mg/kg (Rabbit)*	4h 85.26 mg/l (Rat)*

*(External MSDS)

Skin corrosion/irritation

No data available.

Serious eye damage/irritation

No data available.

Respiratory or skin sensitization

Sensitization test: guinea pig (methanol)
Result: negative (IUCLID) (methanol)

Germ cell mutagenicity

No data available.

Carcinogenity

No data available.

Reproductive toxicity

Regarding the available data the classification criteria are not fulfilled.

Specific target organ toxicity – single exposure

Target organs: Eyes (methanol)
Causes damage to organs. (methanol)

Specific target organ toxicity – repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

12. Ecological information

12.1. Toxicity

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Methanol (CAS 67-56-1)	96h EC50 Pseudokirchneriella subcapitata (green algae): ca. 22000 mg/l* 8d IC5 Scenedesmus quadricauda (green algae): 8000 mg/l*	200h NOEC Oryzias latipes (orange-red killifish): 7900 mg/l* 96h LC50 Lepomis macrochirus (Bluegill sunfish): 15400 mg/l*	16h EC5 Pseudomonas fluorescens: 6600 mg/l*	48h EC50 Daphnia magna (Water flea): >10000 mg/l* 72h EC5 E.sulcatum: >10000 mg/l*

*(External MSDS)

12.2. Persistence and degradability

(Methanol)
Biodegradability
99%; 30d
OECD Test Guideline 301D
Readily biodegradable.

Biochemical Oxygen Demand (BOD)
600 – 1120 mg/g (5d) (IUCLID)

Chemical Oxygen Demand (COD)
1420 mg/g (IUCLID)

Theoretical Oxygen Demand (ThOD)
1500 mg/g (Lit.)

Ratio BOD/ThBOD)
BOD5 76%
Closed bottle test

12.3. Bioaccumulative potential

Chemical name	Log Pow
Methanol	-0,77

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products Dispose of as hazardous waste in compliance with local and national regulations.

Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

14.1. UN/ID No

ADR/RID: UN1992 IMDG: UN1992 IATA: UN1992

14.2. UN proper shipping name

ADR/RID: 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)
IMDG: FLAMMABLE LIQUID, TOXIC, N.O.S. solution
IATA: FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

14.3. Transport hazard class

ADR/RID: 3 (6.1) IMDG: 3 (6.1) IATA: 3 (6.1)

14.4. Packaging group

ADR/RID: II IMDG: II IATA: II

14.5. Environmental hazards

ADR/RID: - IMDG Marine pollutant: - IATA: -

14.6. Special precautions for user

No data available.

15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1. Safety, health and environmental regulations/legislation specific for the substance

No information available.

15.2. Chemical safety assessment

No information available.

16. Other information

Full text of H-statements referred to under Sections 2 and 3

H225 – Highly flammable liquid and vapor.
H226 – Flammable liquid and vapor.
H301 – Toxic if swallowed.
H311 – Toxic in contact with skin.
H331 – Toxic if inhaled.
H370 – Causes damage to organs.

Revision note: New format.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this safety data sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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

1.1. Product identifier

Product name	Dilution buffer
Product code	5000PBS, 5000PBS15

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory use

1.3. Details of the supplier of the safety data sheet

Company	R-Biopharm Nederland B.V. Beijerinckweg 18 6827 BN Arnhem Netherlands
Telephone	+31 (0)26-363-0364
Fax	+31 (0)26-364-5111
E-mail address	info@r-biopharm.nl

1.4. Emergency telephone number

Emergency phone #	Please look for the emergency telephone number in your country before using this substance or mixture.

2. Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No 1272/2008)

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

2.2. Label elements

Labelling (Regulation (EC) No 1272/2008)

Not applicable.

2.3. Other hazards

Not applicable.

3. Composition/information on ingredients

3.1. Dangerous ingredients

Mixture of substances with none hazardous additions.

For the full text of the H-Statements mentioned in this Section, see Section 16.
For more detailed information on health effects and symptoms, see Section 11.

4. First aid measures

4.1. Description of first aid measures

General advice	First aider needs to protect himself. Consult a physician. Show this safety data sheet to the doctor in attendance.
Eye contact	Rinse out with plenty of water. Get medical attention immediately if symptoms occur.
Skin contact	Wash off with plenty of water. Remove contaminated clothing. Consult a physician.

Ingestion	Rinse mouth with water. Do NOT induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention.
Inhalation	Move person into fresh air. If not breathing, give artificial respiration. Immediately call in a physician.

4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use water, CO2, dry chemical or foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which must not be used for safety reasons

None known based on information supplied.

5.2. Special hazards arising from the substance or mixture

None known.

5.3. Advise for firefighters

Wear self-contained breathing apparatus and protective suit.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2. Environmental precautions

Should not be released into the environment. Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

6.4. Reference to other sections

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

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.
For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Store at 2°C to 8°C (36°F to 46°F).

7.3. Specific end uses
No data available.

8. Exposure controls/personal protection
8.1. Control parameters
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2. Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Tightly fitting safety glasses

Skin/body protection
Protective/ impervious long sleeved clothing

Hand protection
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the related standard EN374.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the substance/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material:
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has to be checked prior to the application.

Penetration time:
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hygiene measures
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands after working with substance. Do not inhale substance

Environmental Exposure controls
Should not be released into the environment. Do not let product enter drains.

9. Physical and chemical properties
9.1. Information on basic physical and chemical properties
Appearance	Form: liquid

Color	Colorless
Odor	no data available
Odor threshold	no data available
pH	7.4 ± 0.05
Melting point/ freezing point	0°C (32°F)
Initial boiling point/ boiling range	100°C (212°F)
Flash point	not applicable
Evaporation rate	no data available
Flammability (solid, gas)	not applicable
Flammability limits in air	no data available
Vapor pressure	23 hPa
Relative density	no data available
Water solubility	Fully miscible
Partition coefficient: n-octanol/water	no data available
Autoignition temperature	Product is not self igniting
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	Product does not contain an explosion hazard
Oxidizing properties	no data available

9.2. Other safety information

No data available.

10. Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

No further relevant information available.

10.6. Hazardous decomposition products

In the event of fire: See chapter 5.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity
No data available.

Skin corrosion/irritation
No data available.

Serious eye damage/irritation
No data available.

Respiratory or skin sensitization
No data available.

Germ cell mutagenicity
No data available.

Carcinogenity
Contains no ingredient listed as a carcinogen

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.

12. Ecological information

12.1. Toxicity
No data available.

12.2. Persistence and degradability
No data available.

12.3. Bioaccumulative potential
No data available.

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
No data available.

12.6. Other adverse effects
No data available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products	Dispose of as hazardous waste in compliance with local and national regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

14.1. UN/ID No

ADR/RID: - IMDG: - IATA: -

14.2. UN proper shipping name

ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

14.3. Transport hazard class

ADR/RID: - IMDG: - IATA: -

14.4. Packaging group

ADR/RID: - IMDG: - IATA: -

14.5. Environmental hazards

ADR/RID: - IMDG Marine pollutant: - IATA: -

14.6. Special precautions for user

Not applicable.

15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1. Safety, health and environmental regulations/legislation specific for the substance

No information available.

15.2. Chemical safety assessment

No information available.

16. Other information

Full text of H-statements referred to under Sections 2 and 3

Not applicable

Revision note: New format

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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

1.1. Product identifier

Product name	Sample Dilution Buffer
Product code	5161MGSDB

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory use

1.3. Details of the supplier of the safety data sheet

Company	R-Biopharm Nederland B.V. Beijerinckweg 18 6827 BN Arnhem Netherlands
Telephone	+31 (0)26-363-0364
Fax	+31 (0)26-364-5111
E-mail address	info@r-biopharm.nl

1.4. Emergency telephone number

Emergency phone #	Please look for the emergency telephone number in your country before using this substance or mixture.

2. Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No 1272/2008)

Flammable liquid, 3, H226

STOT-SE, 1, H370

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. Label elements

Labelling (Regulation (EC) No 1272/2008)

Pictogram



GHS02 *GHS08*

Signal word: Danger

Hazard statement(s)

H226	Flammable liquid and vapor.
H370	Causes damage to organs.

Precautionary statements

P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P280	Wear protective gloves/ protective clothing.
P308 + P310	IF exposed or concerned: immediately call a POISON CENTRE or doctor/physician.

Supplemental Hazard Statements: None

2.3. Other hazards

None

3. Composition/information on ingredients

3.1. Dangerous ingredients

Chemical name	EC-No	CAS-No	Weight (%)	Classification (1272/2008/EC)	
Methanol	200-659-6	67-56-1	10%	Flam. Liq. 2 H225 Acute Tox. 3 H301 Acute Tox. 3 H331 Acute Tox. 3 H311 STOT SE 1 H370	

For the full text of the H-Statements mentioned in this Section, see Section 16.
For more detailed information on health effects and symptoms, see Section 11.

4. First aid measures

4.1. Description of first aid measures

General advice — First aider needs to protect himself. Consult a physician. Show this safety data sheet to the doctor in attendance.

Eye contact — Rinse out with plenty of water. Get medical attention immediately if symptoms occur.

Skin contact — Wash off with plenty of water. Remove contaminated clothing. Consult a physician.

Ingestion — Rinse mouth with water. Do NOT induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention (mention methanol ingestion).

Inhalation — Move person into fresh air. If not breathing, give artificial respiration. Immediately call in a physician.

4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician — Treat symptomatically.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Use water, CO2, dry chemical or foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which must not be used for safety reasons
None known based on information supplied.

5.2. Special hazards arising from the substance or mixture

Development of hazardous combustion gases or vapors possible in the event of fire.
Fire may cause evolution of:
Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Sulphur oxides, Mercury vapors.

5.3. Advise for firefighters

Wear self-contained breathing apparatus and protective suit.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Use personal protective equipment. Avoid breathing vapors, mist or gas. Keep away from heat and sources of ignition. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2. Environmental precautions

Should not be released into the environment. Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up

Cover drains. Collect, bind and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material. Dispose of properly. Clean up affected area.

6.4. Reference to other sections

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

7.1. Precautions for safe handling

Work under hood. Do not inhale substance/mixture. Handle in accordance with good industrial hygiene and safety practice. Observe label precautions. Keep away from open flames, hot surfaces and sources of ignition.
Avoid formation of aerosols. Avoid exposure - obtain special instructions before use.
For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Store at +2°C to +8°C (36°F to 46°F).

7.3. Specific end uses

No data available.

8. Exposure controls/personal protection

8.1. Control parameters

Chemical name	Type	Value*
Methanol (CAS 67-56-1)	TWA 8hr	133 mg/m^3
	STEL	325 mg/m^3

*(External MSDS)

8.2. Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety glasses

Skin/body protection

Protective/ impervious long sleeved clothing

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the related standard EN374.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the substance/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has to be checked prior to the application.

Penetration time:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands after working with substance. Do not inhale substance.

Environmental Exposure controls

Should not be released into the environment. Do not let product enter drains.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Form: liquid
Color	Colorless
Odor	no data available
Odor threshold	no data available
pH	7.4 ± 0.05
Melting point/ freezing point	no data available
Initial boiling point/ boiling range	no data available
Flash point	no data available
Evaporation rate	no data available
Flammability (solid, gas)	not applicable
Flammability limits in air	no data available
Vapor pressure	no data available
Relative density	no data available
Water solubility	Fully miscible
Partition coefficient: n-octanol/water	no data available

Autoignition temperature	no data available
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	Product does not contain an explosion hazard
Oxidizing properties	no data available

9.2. Other safety information
No data available.

10. Stability and reactivity

10.1. Reactivity
No data available.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No data available.

10.4. Conditions to avoid
Heat, flames and sparks.

10.5. Incompatible materials
No data available.

10.6. Hazardous decomposition products
In the event of fire: See chapter 5.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methanol	5628 mg/kg (Rat)* 1400 mg/kg (Human)*	Ca. 17100 mg/kg (Rabbit)*	4h 85.26 mg/l (Rat)*

*(External MSDS)

Skin corrosion/irritation
No data available.

Serious eye damage/irritation
No data available.

Respiratory or skin sensitization
Sensitization test: guinea pig (methanol)
Result: negative (IUCLID) (methanol)

Germ cell mutagenicity
No data available.

Carcinogenity
No data available.

Reproductive toxicity
Regarding the available data the classification criteria are not fulfilled.

Specific target organ toxicity – single exposure
Target organs: Eyes (methanol)

Causes damage to organs. (methanol)

Specific target organ toxicity – repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

12. Ecological information

12.1. Toxicity

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Methanol (CAS 67-56-1)	96h EC50 Pseudokirchneriella subcapitata (green algae): ca. 22000 mg/l* 8d IC5 Scenedesmus quadricauda (green algae): 8000 mg/l*	200h NOEC Oryzias latipes (orange-red killifish): 7900 mg/l* 96h LC50 Lepomis macrochirus (Bluegill sunfish): 15400 mg/l*	16h EC5 Pseudomonas fluorescens: 6600 mg/l*	48h EC50 Daphnia magna (Water flea): >10000 mg/l* 72h EC5 E.sulcatum: >10000 mg/l*

*(External MSDS)

12.2. Persistence and degradability

(Methanol)
Biodegradability
99%; 30d
OECD Test Guideline 301D
Readily biodegradable.

Biochemical Oxygen Demand (BOD)
600 – 1120 mg/g (5d) (IUCLID)

Chemical Oxygen Demand (COD)
1420 mg/g (IUCLID)

Theoretical Oxygen Demand (ThOD)
1500 mg/g (Lit.)

Ratio BOD/ThBOD)
BOD5 76%
Closed bottle test

12.3. Bioaccumulative potential

Chemical name	Log Pow
Methanol	-0,77

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products Dispose of as hazardous waste in compliance with local and national regulations.

Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

14.1. UN/ID No

ADR/RID: UN1992 IMDG: UN1992 IATA: UN1992

14.2. UN proper shipping name

ADR/RID: 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)
IMDG: FLAMMABLE LIQUID, TOXIC, N.O.S. solution
IATA: FLAMMABLE LIQUID, TOXIC, N.O.S. (METHANOL)

14.3. Transport hazard class

ADR/RID: 3 (6.1) IMDG: 3 (6.1) IATA: 3 (6.1)

14.4. Packaging group

ADR/RID: II IMDG: II IATA: II

14.5. Environmental hazards

ADR/RID: - IMDG Marine pollutant: - IATA: -

14.6. Special precautions for user

No data available.

15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1. Safety, health and environmental regulations/legislation specific for the substance

No information available.

15.2. Chemical safety assessment

No information available.

16. Other information

Full text of H-statements referred to under Sections 2 and 3

H225 – Highly flammable liquid and vapor.
H226 – Flammable liquid and vapor.
H301 – Toxic if swallowed.
H311 – Toxic in contact with skin.
H331 – Toxic if inhaled.
H370 – Causes damage to organs.

Revision note: update 1.3. Details of the supplier of the safety data sheet

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this safety data sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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

1.1. Product identifier

Product name	Rinsing buffer
Product code	5000RB

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory use

1.3. Details of the supplier of the safety data sheet

Company	R-Biopharm Nederland B.V. Beijerinckweg 18 6827 BN Arnhem Netherlands
Telephone	+31 (0)26-363-0364
Fax	+31 (0)26-364-5111
E-mail address	info@r-biopharm.nl

1.4. Emergency telephone number

Emergency phone #	Please look for the emergency telephone number in your country before using this substance or mixture.

2. Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No 1272/2008)

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

2.2. Label elements

Labelling (Regulation (EC) No 1272/2008)

Not applicable.

2.3. Other hazards

Not applicable.

3. Composition/information on ingredients

3.1. Dangerous ingredients

Mixture of substances with none hazardous additions.

For the full text of the H-Statements mentioned in this Section, see Section 16.
For more detailed information on health effects and symptoms, see Section 11.

4. First aid measures

4.1. Description of first aid measures

General advice	First aider needs to protect himself. Consult a physician. Show this safety data sheet to the doctor in attendance.
Eye contact	Rinse out with plenty of water. Get medical attention immediately if symptoms occur.
Skin contact	Wash off with plenty of water. Remove contaminated clothing. Consult a physician.

Ingestion	Rinse mouth with water. Do NOT induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention.
Inhalation	Move person into fresh air. If not breathing, give artificial respiration. Immediately call in a physician.

4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use water, CO2, dry chemical or foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which must not be used for safety reasons

None known based on information supplied.

5.2. Special hazards arising from the substance or mixture

None known.

5.3. Advise for firefighters

Wear self-contained breathing apparatus and protective suit.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2. Environmental precautions

Should not be released into the environment. Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

6.4. Reference to other sections

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

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.
For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Store at 2°C to 8°C (36°F to 46°F).

7.3. Specific end uses
No data available.

8. Exposure controls/personal protection
8.1. Control parameters
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2. Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Tightly fitting safety glasses

Skin/body protection
Protective/ impervious long sleeved clothing

Hand protection
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the related standard EN374.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the substance/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material:
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has to be checked prior to the application.

Penetration time:
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Hygiene measures
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands after working with substance. Do not inhale substance

Environmental Exposure controls
Should not be released into the environment. Do not let product enter drains.

9. Physical and chemical properties
9.1. Information on basic physical and chemical properties

Appearance	Form: liquid
Color	Colorless
Odor	no data available
Odor threshold	no data available
pH	7.4 ± 0.05
Melting point/ freezing point	0°C (32°F)

Initial boiling point/ boiling range	100°C (212°F)
Flash point	not applicable
Evaporation rate	no data available
Flammability (solid, gas)	not applicable
Flammability limits in air	no data available
Vapor pressure	23 hPa
Relative density	no data available
Water solubility	Fully miscible
Partition coefficient: n-octanol/water	no data available
Autoignition temperature	Product is not self igniting
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	Product does not contain an explosion hazard
Oxidizing properties	no data available

9.2. Other safety information

No data available.

10. Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

No further relevant information available.

10.6. Hazardous decomposition products

In the event of fire: See chapter 5.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity

No data available.

Skin corrosion/irritation

No data available.

Serious eye damage/irritation

No data available.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity
No data available.

Carcinogenity
Contains no ingredient listed as a carcinogen

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.

12. Ecological information

12.1. Toxicity
No data available.

12.2. Persistence and degradability
No data available.

12.3. Bioaccumulative potential
No data available.

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
No data available.

12.6. Other adverse effects
No data available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products	Dispose of as hazardous waste in compliance with local and national regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

14.1. UN/ID No
ADR/RID: - IMDG: - IATA: -

14.2. UN proper shipping name
ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

14.3. Transport hazard class
ADR/RID: - IMDG: - IATA: -

14.4. Packaging group

ADR/RID: - IMDG: - IATA: -

14.5. Environmental hazards

ADR/RID: - IMDG Marine pollutant: - IATA: -

14.6. Special precautions for user

Not applicable.

15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1. Safety, health and environmental regulations/legislation specific for the substance

No information available.

15.2. Chemical safety assessment

No information available.

16. Other information

Full text of H-statements referred to under Sections 2 and 3

Not applicable

Revision note: New format

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this safety data sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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

1.1. Product identifier

Product name	TMB substrate
Product code	5000TMB

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory use. This product is a colorimetric solution for use in immunological in-vitro tests, based on the marker enzyme HRP.

1.3. Details of the supplier of the safety data sheet

Company	R-Biopharm Nederland B.V. Beijerinckweg 18 6827 BN Arnhem Netherlands
Telephone	+31 (0)26-363-0364
Fax	+31 (0)26-364-5111
E-mail address	info@r-biopharm.nl

1.4. Emergency telephone number

Emergency phone #	Please look for the emergency telephone number in your country before using this substance or mixture.

2. Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No 1272/2008)

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

2.2. Label elements

Labelling (Regulation (EC) No 1272/2008)

Not applicable.

2.3. Other hazards

Not applicable.

3. Composition/information on ingredients

3.1. Dangerous ingredients

Chemical name	EC-No	CAS-No	Weight (%)	Classification (1272/2008/EC)	
Citric acid monohydrate	201-069-1	5949-29-1	<5 %	Eye Irrit. 2 H319	 *GHS07*

For the full text of the H-Statements mentioned in this Section, see Section 16.

For more detailed information on health effects and symptoms, see Section 11.

4. First aid measures

4.1. Description of first aid measures

General advice	First aider needs to protect himself. Consult a physician. Show this safety data sheet to the doctor in attendance.
Eye contact	Rinse out with plenty of water. Remember to remove contact lenses. Get medical attention immediately if symptoms occur.

Skin contact	Wash off with plenty of water. Remove contaminated clothing. Consult a physician.
Ingestion	Rinse mouth with water. Do NOT induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention.
Inhalation	Move person into fresh air. If not breathing, give artificial respiration. Immediately call in a physician.

4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use water, CO2, dry chemical or foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which must not be used for safety reasons

None known based on information supplied.

5.2. Special hazards arising from the substance or mixture

None known.

5.3. Advise for firefighters

Wear self-contained breathing apparatus and protective suit.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2. Environmental precautions

Should not be released into the environment. Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

6.4. Reference to other sections

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

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.
For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Store at 2°C to 8°C (36°F to 46°F).

7.3. Specific end uses
No data available.

8. Exposure controls/personal protection
8.1. Control parameters
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2. Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Tightly fitting safety glasses

Skin/body protection
Protective/ impervious long sleeved clothing

Hand protection
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the related standard EN374.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the substance/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material:
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has to be checked prior to the application.

Penetration time:
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hygiene measures
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands after working with substance. Do not inhale substance

Environmental Exposure controls
Should not be released into the environment. Do not let product enter drains.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Form: liquid
Color	Colorless
Odor	no data available
Odor threshold	no data available
pH	7.4 ± 0.05
Melting point/ freezing point	0°C (32°F)
Initial boiling point/ boiling range	100°C (212°F)
Flash point	not applicable
Evaporation rate	no data available
Flammability (solid, gas)	not applicable
Flammability limits in air	no data available
Vapor pressure	no data available
Relative density	no data available
Water solubility	Fully miscible
Partition coefficient: n-octanol/water	no data available
Autoignition temperature	Product is not self igniting
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	Product does not contain an explosion hazard
Oxidizing properties	no data available

9.2. Other safety information

No data available.

10. Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

No further relevant information available.

10.6. Hazardous decomposition products

In the event of fire: See chapter 5.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity
No data available.

Skin corrosion/irritation
No data available.

Serious eye damage/irritation
No data available.

Respiratory or skin sensitization
No data available.

Germ cell mutagenicity
No data available.

Carcinogenity
Contains no ingredient listed as a carcinogen

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.

12. Ecological information

12.1. Toxicity
No data available.

12.2. Persistence and degradability
No data available.

12.3. Bioaccumulative potential
No data available.

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
No data available.

12.6. Other adverse effects
No data available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products	Dispose of as hazardous waste in compliance with local and national regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

14.1. UN/ID No

ADR/RID: - IMDG: - IATA: -

14.2. UN proper shipping name

ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

14.3. Transport hazard class

ADR/RID: - IMDG: - IATA: -

14.4. Packaging group

ADR/RID: - IMDG: - IATA: -

14.5. Environmental hazards

ADR/RID: - IMDG Marine pollutant: - IATA: -

14.6. Special precautions for user

Not applicable.

15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1. Safety, health and environmental regulations/legislation specific for the substance

No information available.

15.2. Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

16. Other information

Full text of H-statements referred to under Sections 2 and 3

H319 – Causes serious eye irritation

Revision note: New format

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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

1.1. Product identifier

Product name	Stop Solution
Product code	5000SS

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory use

1.3. Details of the supplier of the safety data sheet

Company	EuroProxima BV Beijerinckweg 18 6827 BN Arnhem Netherlands
Telephone	+31 (0)26-363-0364
Fax	+31 (0)26-364-5111
E-mail address	info@r-biopharm.nl

1.4. Emergency telephone number

Emergency phone #	Please look for the emergency telephone number in your country before using this substance or mixture.

2. Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No 1272/2008)

Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.

2.2. Label elements

Labelling (Regulation (EC) No 1272/2008)

Not applicable.

2.3. Other hazards

Not applicable.

3. Composition/information on ingredients

3.1. Dangerous ingredients

Chemical name	EC-No	CAS-No	Weight (%)	Classification (1272/2008/EC)	
Sulfuric acid	231-639-5	7664-93-9	2.5-<5	Skin Corr.1A H314	 *GHS07*

For the full text of the H-Statements mentioned in this Section, see Section 16.

For more detailed information on health effects and symptoms, see Section 11.

4. First aid measures

4.1. Description of first aid measures

General advice	First aider needs to protect himself. Consult a physician. Show this safety data sheet to the doctor in attendance.
Eye contact	Rinse out with plenty of water. Immediately call in ophthalmologist.

Skin contact	Wash off with plenty of water. Remove contaminated clothing. If available swab with polyethylene glycol 400. Call a physician immediately.
Ingestion	Rinse mouth with water. Do NOT induce vomiting. If conscious, give 2 glasses of water. Do not attempt to neutralize. Get immediate medical attention.
Inhalation	Move person into fresh air. If not breathing, give artificial respiration. Immediately call in a physician.

4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically.

5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Use water, CO2, dry chemical or foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which must not be used for safety reasons

None known based on information supplied.

5.2. Special hazards arising from the substance or mixture

None known.

5.3. Advise for firefighters

Wear self-contained breathing apparatus and protective suit

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralizing material (e.g. sand, silica gel, acid-binder, universal binder, sawdust). Dispose of properly. Clean up affected area.

6.4. Reference to other sections

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

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.
For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Store at 2°C to 8°C (36°F to 46°F).

7.3. Specific end uses
No data available.

8. Exposure controls/personal protection
8.1. Control parameters
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2. Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Tightly fitting safety glasses

Skin/body protection
Acid resistant protective clothing

Hand protection
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the related standard EN374.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the substance/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material:
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has to be checked prior to the application.

Penetration time:
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Respiratory protection
Required when vapours/aerosols are generated.
Recommended filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances.
The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Hygiene measures
Immediately change contaminated clothing and immerse in water. Apply preventive skin protection. Wash hands after working with substance. Do not inhale substance.

Environmental Exposure controls
Do not let product enter drains.

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Form: liquid
Color	Colorless
Odor	Odorless
Odor threshold	no data available
pH	0.5 at 0.5M 25°C (77°F)
Melting point/ freezing point	no data available
Initial boiling point/ boiling range	no data available
Flash point	not applicable
Evaporation rate	no data available
Flammability (solid, gas)	not applicable
Flammability limits in air	no data available
Vapor pressure	no data available
Relative density	no data available
Water solubility	Fully miscible
Partition coefficient: n-octanol/water	no data available
Autoignition temperature	Product is not self igniting
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	no data available
Oxidizing properties	no data available

9.2. Other safety information

No data available.

10. Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Heating can release hazardous gases.

10.5. Incompatible materials

Animal/vegetable tissues, Metals, Contact with metals liberates hydrogen gas.

10.6. Hazardous decomposition products

In the event of fire: See chapter 5.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity
No data available.

Skin corrosion/irritation
Mixtures can cause skin irritation.

Serious eye damage/irritation
Mixture can cause eye irritation.

Respiratory or skin sensitization
No data available.

Germ cell mutagenicity
No data available.

Carcinogenity
Contains no ingredient listed as a carcinogen

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.

12. Ecological information

12.1. Toxicity
No data available.

12.2. Persistence and degradability
No data available.

12.3. Bioaccumulative potential
No data available.

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
No data available.

12.6. Other adverse effects
No data available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products	Dispose of as hazardous waste in compliance with local and national regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

14.1. UN/ID No

ADR/RID: - IMDG: - IATA: -

14.2. UN proper shipping name

ADR/RID: Not dangerous goods
IMDG: Not dangerous goods
IATA: Not dangerous goods

14.3. Transport hazard class

ADR/RID: - IMDG: - IATA: -

14.4. Packaging group

ADR/RID: - IMDG: - IATA: -

14.5. Environmental hazards

ADR/RID: - IMDG Marine pollutant: - IATA: -

14.6. Special precautions for user

Not applicable.

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15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1. Safety, health and environmental regulations/legislation specific for the substance

No information available.

15.2. Chemical safety assessment

No information available.

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16. Other information

Full text of H-statements referred to under Sections 2 and 3

H314 – Causes severe skin burns and eye damage

Revision note: New format

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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