



Material Safety Data Sheet

FREE soluble RANKL High Sensitivity ELISA
Catalog Number: 04-BI-20462

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



GENERAL SECTION

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Product name: FREE soluble RANKL High Sensitivity ELISA
ENZYME IMMUNOASSAY FOR THE QUANTITATIVE
DETERMINATION OF FREE SOLUBLE UNCOMPLEXED HUMAN
RANKL IN SERUM OR HEPARIN PLASMA
Product Number: CAT. NO. BI-20462, 12 X 8 TESTS
Brand: Biomedica Medizinprodukte GmbH & Co KG

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

Identified uses: IN-VITRO DIAGNOSTICS IN EU (CE-marked)

1.3. Details of the supplier of the data sheet

Company: Biomedica Medizinprodukte GmbH & Co KG A-1210
Wien, Divischgasse 4
Telephone: +43/1/291 07 45
Fax: +43/1/291 07 85
E-mail: export@bmgrp.com
Prepared by Biomedica Slovakia, 841 01 Bratislava, Drobného 27

1.4. Emergency telephone number

Phone: +43-1-4064343

1.5. Further information

All reagents sold by BIOMEDICA must be handled only by qualified laboratory personal. All preservative substances used in our products are there in too low concentrations to constitute any danger and standard laboratory precautions should suffice for effective protection.

Nonetheless, in the case of unusual exposure, the form(s), furnished in the appendix, provoke(s) all the necessary information.

1.6. Partition of section 2-16 of the data safety sheet in specific forms The following are hazardous substances present in this product:

Hazardous substance	Substance part of the following ELISA kit component, [Identification name of vial]	Quantity/ concentration of (hazardous) substance	Material Safety data sheet [no.]	Page of this MSDS
Substrate (TMB solution)	TMB	0.1%	1	3
Stop Solution	STOP	9.81%	2	10
Antibody (anti-human sRANKL ligand antibody)	AB	8.43%	3	16

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



Conjugate (Streptavidin Poly-HRP)	CONJ	1.41%	4	23
Assay buffer	ASYBUF	1.43 %	5	30
Standards, Control	STD, CTRL	100%	6	37
Wash buffer concentrate 20x	WASHBUF	18.08%	7	43

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



SPECIFIC SECTION

Material safety data sheet no.1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Kit component name: TMB substrate
component ID: TMB
Brand: Biomedica Medizinprodukte GmbH & Co KG

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

Identified uses: AS A SINGLE COMPONENT FOR RESEARCH USE ONLY

1.3. Details of the supplier of the data sheet

Company: Biomedica Medizinprodukte GmbH & Co KG, A-1210 Wien,
Divischgasse 4
Telephone: +43/1/291 07 45
Fax: +43/1/291 07 85
E-mail: export@bmgrp.com

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Although it is not classified as hazardous according to the European Regulation 1999/45/EC the product should be handled with the usual care for all chemicals, in order to avoid synergistic effects.

Because of the preservative it may be dangerous for water organisms.

2.2. Label elements

Labeling according Regulation (EC) No 1272/2008 [CLP]

Pictogram	none	Signal word	none
Hazard statement			none
Precautionary statement			none
Supplemental hazard statements			none

2.3. Other hazards

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances See section 3.2

3.2. Mixtures

Chemical characterization of product composition:

Aqueous solution of TMB, hydrogen peroxide, Tween 20 as detergent, citrate, EDTA, Kathon CG as preservative

Dangerous components:

Component	Classification R-phrases	Percentage
-----------	-----------------------------	------------

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



3,3',5,5'-Tetramethylbenzidine		
EINECS: 259-364-6 CAS-NR: 54827-17-7	X _n R20/21/22-36/37/38-40	0.036%
Ethylene diamine tetraacetate disodium salt MW: C ₁₀ H ₁₄ O ₈ N ₂ Na ₂ ·2H ₂ O		
EINECS: 205-358-3 CAS-NR: 6381-92-6	Xi, R36/38 S26/37/39	0.093%
5-Chlor-2-methyl-4-isothiazolin-3-one		
EINECS: 247-500-7 T, N		0.00009%
CAS-NR: 26172-55-4 R23/24/25-34-43-50/53		
2-Methyl-4-isothiazolin-3-one		
EINECS: 220-239-6 T, N		0.00003%
CAS-NR: 2682-20-4 R23/24/25-34-43-50/53		
Hydrogen peroxide		
EINECS: 231-765-0 CAS-NR: 7722-84-1	C, O R8/34	0.002%

For the full text of the H-statements and R-phrases mentioned in this section, see section 16

4. FIRST AID MEASURES

4.1. Description of the first aid measures

General advice

Contaminated clothing should be washed prior to next use. Consult a physician, show this safety data sheet to the doctor in attendance.

In case of skin contact

After contact with skin carefully wash with water.

In case of eye contact

After contact with the eyes carefully rinse the opened eye with running water for several minutes and consult a physician.

If swallowed

After swallowing, rinse mouth and drink water. Consult a physician.

4.2. Most important symptoms and effects, both acute and delayed No data available.

4.3. Indication of any immediate medical attention and special treatment needed No data available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



5.2. Special hazards arising from the substance or mixture No data available.

5.3. Advice for firefighters

In case of fire toxic vapours can be released.

Wear breath protective mask and protective clothes if necessary during fire fighting.

5.4. Further information

The product itself is not inflammable; extinguishing measures should therefore be prepared for an environmental fire.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency

procedures Use personal protective equipment. Avoid contact with skin and eyes.

6.2. Environmental precautions Do not let product enter drains.

6.3. Methods and materials for containment and cleaning up

Dilute with plenty of water. Ventilate and clean affected area very carefully after having completely disposed off the material.

6.4. Reference to other sections No data available.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling Special measures are not required.

7.2. Conditions for safe storage, including any incompatibilities At 2-8°C in closed HDPE or PP bottles. Protect from light.

7.3. Specific end uses No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace parameters

EINECS	name	limit value according MAK (TRGS 900)
259-364-6	3,3',5,5'-Tetramethylbenzidine	not listed
205-358-3	Ethylene diamine tetraacetate disodium salt	not listed
247-500-7	5-Chlor-2-methyl-4-isothiazolin-3-one	0.05 mg/m3
220-239-6	2-Methyl-4-isothiazolin-3-one	0.05 mg/m3
231-765-0	Hydrogen peroxide	1.4 mg/m3

By using the product according to the requirements, no air pollution is to be expected.

8.2. Expose controls

Appropriate engineering controls

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

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



8.3. Personal protective equipment

Respiratory protection: not required

Hand protection: protective gloves of nitril-rubber or natural latex

Eye protection: protective glasses. Tightly fitting safety goggles. Face-shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- a) Appearance form: liquid product, slightly foaming when shaken
- b) Colour: clear
- c) Odour: characteristic
- d) pH: 3.6 – 3.8
- e) Melting point/freezing point: no data available.
- f) Initial boiling point and boiling range: 100°C
- g) Flash point: not applicable
- h) Evaporation rate: no data available.
- i) Flammability (solid, gas): no data available.
- j) Upper/lower flammability or explosive limits: no data available.
- k) Vapour pressure: no data available.
- l) Vapour density: no data available.
- m) Relative density: 1.003 g/ml
- n) Water solubility: complete soluble/miscible
- o) Partition coefficient: n-octanol/water: complete soluble/miscible in protic solvents
- p) Auto-ignition temperature: no data available.
- q) Decomposition temperature: no data available.
- r) Viscosity: no data available.
- s) Explosive properties: no data available.
- t) 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

Chemically stable under recommended conditions of use and storage.

10.3. Possibility of hazardous reactions No data available.

10.4. Conditions to avoid

Strong heat, light, especially sunlight will not cause a dangerous reaction, but destroys the quality as substrate solution.

10.5. Incompatible materials

Heavy metal salts, peroxidases and catalases will not cause a dangerous reaction, but destroys the quality as substrate solution.

10.6. Hazardous decomposition products

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



The final decomposition product is the yellow Di-ammoniumion of Tetramethylbenzidin, a slightly water soluble biodegradable substance not classified as hazardous.

Note: contains preservatives as stated under SPECIFIC SECTION material safety data sheet NO.1, point 3 *COMPOSITION/INFORMATION ON INGREDIENTS*.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Component	valuation	value	species
3,3',5,5'-tetramethylbenzidine	no information		
Ethylene diamine tetraacetate disodium salt	LD50 (oral)	2000 mg/kg	rat
5-chlor-2-methyl-4isothiazolin-3-one	LD50 (oral)	3350 mg/kg	rat
2-methyl-4-isothiazolin-3one	LD50 (oral)	550 mg/kg	rat
hydrogen peroxide	LD50 (oral)	1232 mg/kg	rat
	LD50 (dermal)	3000 mg/kg	rabbit

Further toxicological information:

Quantitative data concerning toxicity of the product do not exist.

12. ECOLOGICAL INFORMATION

Only relevant for the preservatives 5-chlor-2-methyl-4-isothiazolin-3-one and 2-methyl-4- isothiazolin-3-one

12.1. Toxicity

species	valuation	value
trout	LC50 (mg/l)	0.19
bass	LC50 (mg/l)	0.28
marine algae (Skeletonema costatum)	EC50 (mg/l)	0.003
algae (Selenastrum capricornutum)	EC50 (mg/l)	0.018
invertebrates (Daphnia magna)	EC50 (mg/l)	0.16

12.2. Persistence and degradability

substance	t ½ anerobic (h)
5-chlor-2-methyl-4-isothiazolin-3-one	4.8
2-methyl-4-isothiazolin-3-one	9.1

12.3. Bio-accumulative 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

If used properly, no ecological problems are to be expected.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product

May not be discarded together with the normal waste.

Chemicals or remaining residues have to be treated as special waste and should be discarded according to the appropriate legislation. Information can be collected from the responsible public authorities.

Contaminated packaging

Disposal according to the instructions of the public authorities. Contaminated packages have to be treated like the substance itself. Packaging, that is not contaminated, can be recycled or treated like normal house garbage.

14. TRANSPORT INFORMATION

14.1. UN number

Non-regulated, non-hazardous for transport.

14.2. UN proper shipping name

Non-regulated, non-hazardous for transport.

14.3. Transport hazard class(es)

Non-regulated, non-hazardous for transport.

14.4. Packaging group

Non-regulated, non-hazardous for transport.

14.5. Environmental hazards

No data available.

14.6. Reportable Quantity (RQ)

No data available.

14.7. Emergency Telephone Number (during transport)

CHEMTREC: 1-800-424-9300 (US and Canada)

1-703-527-3887 (International shipments)

14.8. 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 or mixture

Symbol: not applicable.

Designation: not applicable.

15.2. Chemical Safety assessment

Water endangering class 1 (self-classification): low potential of water endangering.

16. OTHER INFORMATION

Text of H-code(s) and R-phrases(s) mentioned in Section 3

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



classification	Number	description
Xn		harmful
Xi		irritant
N		environmental hazard
T		toxic
C		corrosive
O		oxidizing
R	8	Contact with combustible material may cause fire.
	20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
	23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
	34	Causes burns.
	36/37/38	Irritating to eyes, respiratory system and skin.
	40	Possible risk of cancer.
	43	May cause sensitization by skin contact.
	50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	37	Wear suitable gloves.
	39	Wear eye/face protection.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Biomedica Medizinprodukte GmbH & Co KG shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



SPECIFIC SECTION

Material safety data sheet no.2

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Kit component name: Sulfuric acid (H₂SO₄)
component ID: STOP
Brand: Biomedica Medizinprodukte GmbH & Co KG

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

Identified uses: AS A SINGLE COMPONENT FOR RESEARCH USE ONLY

1.3. Details of the supplier of the data sheet

Company: Biomedica Medizinprodukte GmbH & Co KG, A-1210 Wien,
Divischgasse 4
Telephone: +43/1/291 07 45
Fax: +43/1/291 07 85
E-mail: export@bmgrp.com

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

2.2. Label elements

Labeling according Regulation (EC) No 1272/2008 [CLP]

Pictogram No data available. Signal word No data available.
Hazard statement No data available.
Precautionary statement No data available. Supplemental hazard statements No data available.

2.3. Other hazards No data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

See section 3.2

3.2. Mixtures

Component	Classification	Percentage
Sulfuric acid		
CAS-No. 7664-93-9 EC-Nr. 231-639-5 INDEX-Nr. 016-020-00-8	Skin Corr.1B;STOT SE3; H314 C, R35 S26, S30, S45	9.81%

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



Water		
CAS-No. 7732-18-5 EC-No. 231-791-2	-	90.19%

For the full text of the H-statements and R-phrases mentioned in this section, see section 16.

4. FIRST AID MEASURES

4.1. Description of the first aid measures

General advice

Consult a physician, show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 min and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

Rinse mouth with water. Consult a physician.

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

No data available.

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

No data available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4. Further information

No data available.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency

procedures Use personal protective equipment. Avoid breathing vapour s, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2. Environmental precautions

Do not let product enter drains.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections No data available.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling Avoid inhalation of vapour or mist.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3. Specific end uses No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace parameters

No data available.

8.2. Expose controls

Appropriate engineering controls

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

8.3. Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Face-shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body protection

Lab coat protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- a) Appearance form: liquid
- b) Odour: no data available.
- c) Odour Threshold: no data available.
- d) pH: no data available.
- e) Melting point/freezing point: no data available.
- f) Initial boiling point and boiling range: no data available.
- g) Flash point: no data available.
- h) Evapour ation rate: no data available.
- i) Flammability (solid, gas): no data available.
- j) Upper/lower flammability or explosive limits: no data available.
- k) Vapour pressure: no data available.
- l) Vapour density: no data available.
- m) Relative density: no data available.
- n) Water solubility: no data available.
- o) Partition coefficient: n-octanol/water: no data available.
- p) Auto-ignition temperature: no data available.
- q) Decomposition temperature: no data available.
- r) Viscosity: no data available.
- s) Explosive properties: no data available.
- t) 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

Chemically stable under recommended conditions of use and storage..

10.3. Possibility of hazardous reactions No data available.

10.4. Conditions to avoid No data available.

10.5. Incompatible materials No data available.

10.6. Hazardous decomposition products No data available.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects Acute toxicity No data available.
Skin corrosion/irritation No data available.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



Serious eye damage/eye irritation

No data available.

Respiratory or skin

sensitization No data available.

Germ cell mutagenicity No data available.

Carcinogenicity

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Sulfuric acid) **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 May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion May be harmful if swallowed. Causes burns.

Skin May be harmful if absorbed through skin. Causes skin burns.

Eyes May be harmful in contact with eyes. Causes eye burns.

Additional information

No data available.

12. ECOLOGICAL INFORMATION

12.1. Toxicity No data available.

12.2. Persistence and degradability No data available.

12.3. Bio-accumulative 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

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



14. TRANSPORT INFORMATION

14.1. UN number

Non-regulated, non-hazardous for transport.

14.2. UN proper shipping name

Non-regulated, non-hazardous for transport.

14.3. Transport hazard class(es)

Non-regulated, non-hazardous for transport.

14.4. Packaging group

Non-regulated, non-hazardous for transport.

14.5. Environmental hazards

No data available.

14.6. Reportable Quantity (RQ)

No data available.

14.7. Emergency Telephone Number (during transport)

CHEMTREC: 1-800-424-9300 (US and Canada)
1-703-527-3887 (International shipments)

14.8. 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 or mixture

No data available.

15.2. Chemical safety assessment

No data available.

16. OTHER INFORMATION

Text of H-code(s) and R-phrases(s) mentioned in Section 3

Classification	Number	description
Skin Corr.	1B	Skin corrosion

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



STOT SE	3	Specific target organ toxicity - single exposure
C		Corrosive
H	314	Causes severe skin burns and eye damage
R	35	Causes severe burns
S	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	30	Never add water to this product
	45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Biomedica Medizinprodukte GmbH & Co KG shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

SPECIFIC SECTION

Material safety data sheet no.3

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Kit component name: Antibody
Component ID: AB
Brand: Biomedica Medizinprodukte GmbH & Co KG

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

Identified uses: AS SINGLE COMPONENT FOR RESEARCH USE ONLY

1.3. Details of the supplier of the data sheet

Company: Biomedica Medizinprodukte GmbH & Co KG, A-1210 Wien,
Divischgasse 4
Telephone: +43/1/291 07 45
Fax: +43/1/291 07 85
E-mail: export@bmgrp.com

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Based on percentages of hazardous ingredients in this product, this product is not classified as "dangerous" under EU Directives (67/548/EEC and 1999/45/EC) or hazardous under US OSHA Hazard Communication Regulations (29 CFR 1910.1200).

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



2.2. Label elements

Labeling according Regulation (EC) No 1272/2008 [CLP]

Pictogram none Signal word none
Hazard statement none
Precautionary statement none
Supplemental hazard statements none

2.3. Other hazards None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances See section 3.2.

3.2. Mixtures

Aqueous solution of $\text{Na}_2\text{HPO}_4 \cdot 7\text{H}_2\text{O}$, KH_2PO_4 , KCl, NaCl, sterile goat serum and Tween20.

Component	Classification	Percentage
Proprietary formulation; no hazardous components above 1% or carcinogens above 0.1%		
CAS-No. None EINECS -No. none	Not classified	100%
Goat Serum		
-	-	1%
Mouse Serum		
-	-	1%
Triton X-100 , MW: ($\text{C}_2\text{H}_4\text{O}$) $_n\text{C}_{14}\text{H}_{22}\text{O}$	-	1%
CAS-No. 9002-93-1, EC N.A.	N Xn R22, R36, R51/53	1%
Boric acid , MW: H_3BO_3		
CAS-No. 10043-35-3 EC- No. 233-139-2	T R 60-61 S 53	0.31%
Sodium tetraborate , MW: $\text{B}_4\text{Na}_2\text{O}_7$		
CAS-No. 1330-43-4 EC- No. 215-540-4	T R 60-61	0.02%
Human serum		
-	-	5%
Proclin 300		
CAS-No.7732-18-5 EC-No. 231-791-2	R2/21/22-34-43 R51/53	0,1%

For the full text of the H-statements and R-phrases mentioned in this section, see section 16.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



4. FIRST AID MEASURES

4.1. Description of the first aid measures

General advice

Consult a physician, show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off immediately with soap and plenty of water.

In case of eye contact

Rinse thoroughly with plenty of water, also under the eyelids.

If swallowed

Never give anything by mouth to an unconscious person. Call a physician.

4.2. Most important symptoms and effects, both acute and delayed No data available.

4.3. Indication of any immediate medical attention and special treatment needed No data available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

No restriction; use appropriate agent for surrounding fire.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products formed under fire conditions. Nature of decomposition products not known.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

5.4. Further information No data available.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures Use personal protective equipment.

6.2. Methods and materials for containment and cleaning up Soak up with inert absorbent material. Do not let product enter drains.

6.3. Reference to other sections No data available.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling No special handling advice required.

7.2. Conditions for safe storage, including any incompatibilities Keep in properly labeled containers; Store at 2-8°C.

VbF-Class: not applicable

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



7.3. Specific end uses No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace parameters

No data available.

8.2. Expose controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

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

8.3. Personal protective equipment Eye/face protection

Tightly fitting safety goggles.

Skin protection

Handle with chemical-resistance gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance form:	liquid
b) Colour:	green
c) Odour:	none
d) pH:	7.3- 7.5
e) Melting point/freezing point:	no data available.
f) Initial boiling point and boiling range:	no data available
g) Flash point:	no data available.
h) Evapour ation rate:	no data available.
i) Flammability (solid, gas):	no applicable.
j) Upper/lower flammability or explosive limits:	no applicable.
k) Vapour pressure:	no data available.
l) Vapour density:	no data available.
m) Relative density:	no data available.
n) Water solubility:	complete.
o) Partition coefficient: n-octanol/water:	no data available.
p) Auto-ignition temperature:	no applicable.
q) Decomposition temperature:	no data available.
r) Viscosity:	no data available.
s) Explosive properties:	not explosive.
t) Oxidizing properties:	no data available.

9.2. Other safety information No data available.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



10. STABILITY AND REACTIVITY

10.1. Reactivity

Hazardous polymerization: will not occur..

10.2. Chemical stability

Chemically stable under recommended conditions of use and storage.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

No data available.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Though complete toxicity information on AB is not available, none of its components are known to be toxic or hazardous at used concentrations. No component of this product contains levels greater than or equal to 0.1% which is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

The product contains Tween20 (0.1%), which can produce adverse health effects in its concentrated forms.

Acute toxicity

Triton X-100:

LD50 Oral - rat - 1.800 mg/kg

LD50 Dermal - rabbit - 8.000 mg/kg

Boric Acid:

Acute Oral Toxicity (LD50): 2.660 mg/kg [rat]

Sodium tetraborate:

LD50 Oral - rat - 2.400 - 2.600 mg/kg

LD50 Dermal - rabbit - > 2.000 mg/kg,

Skin corrosion/irritation

No data available.

Serious eye damage/eye irritation

No data available.

Respiratory or skin

sensitization No data available.

Germ cell mutagenicity No data available.

Carcinogenicity No data available.

Reproductive

toxicity No data available.

Specific target organ toxicity - single exposure

No data available.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



Specific target organ toxicity - repeated exposure No data available. **Aspiration hazard** No data available.

Additional information
not available

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Though complete toxicity information on AB is not available, none of its components are known to be toxic or hazardous at used concentrations. No component of this product contains levels greater than or equal to 0.1% which is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

The product contains Tween20 (0.1%), which can produce adverse health effects in its concentrated forms.

Polyoxyethylene (20) sorbitan monolaurate:
Toxicity (LC50): 350 mg/l for 24h [fish],

12.2. Persistence and degradability No data available.

12.3. Bio-accumulative 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

Product

Prevent product from entering drains. Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

14.1. UN number

Non-regulated, non-hazardous for transport.

14.2. UN proper shipping name

Non-regulated, non-hazardous for transport.

14.3. Transport hazard class(es)

Non-regulated, non-hazardous for transport.

14.4. Packaging group

Non-regulated, non-hazardous for transport.

14.5. Environmental hazards No data available.

14.6. Reportable Quantity (RQ) No data available.

14.7. Emergency Telephone Number (during transport)

CHEMTREC: 1-800-424-9300 (US and Canada)

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



1-703-527-3887 (International shipments)

14.8. Special precautions for user No data available.

15. REGULATORY INFORMATION US FEDERAL REGULATIONS

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION, AND LIABILITY ACT): Not Applicable

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):
Not listed

INTERNATIONAL REGULATIONS

There are no hazardous ingredients in an amount that requires identification and labeling according to European Community Directives.

EUROPEAN UNION'S REACH (REGISTRATION, EVALUATION, AND AUTHORIZATION OF CHEMICALS):

This product meets the definition of a preparation. The aggregate volume of each non-exempt substance in this product does not exceed the 1 metric ton per year threshold. Therefore, registration is not required.

This safety data sheet has been prepared to comply with the requirements of Annex II, European Community Regulation No. 1907/2006 (REACH) and ANSI Z400.1-2004 guidelines.

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture No data available.

15.2. Chemical safety assessment No data available.

16. OTHER INFORMATION

Text of H-code(s) and R-phrases(s) mentioned in Section 3

classification	Number	description
Xn		harmful
N		environmental hazard
T		toxic
R	2	Risk of explosion by shock, friction, fire or other source of ignition
	21	Harmful in contact with skin
	22	Harmful if swallowed.
	34	Causes burns
	36	Irritating to eyes
	41	Risk of serious damage to eyes.
	43	May cause sensitization by skin contact
	50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S	53	Avoid exposure - obtain special instructions before use.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Biomedica Medizinprodukte GmbH & Co KG shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



SPECIFIC SECTION

Material safety data sheet no.4

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Kit component name: Conjugate
Component ID: CONJ
Brand: Biomedica Medizinprodukte GmbH & Co KG

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

Identified uses: AS A SINGLE COMPONENT FOR RESEARCH USE ONLY

1.3. Details of the supplier of the data sheet

Company: Biomedica Medizinprodukte GmbH & Co KG, A-1210 Wien,
Divischgasse 4
Telephone: +43/1/291 07 45
Fax: +43/1/291 07 85
E-mail: export@bmgrp.com

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Based on percentages of hazardous ingredients in this product, this product is not classified as "dangerous" under EU Directives (67/548/EEC and 1999/45/EC) or hazardous under US OSHA Hazard Communication Regulations (29 CFR 1910.1200).

2.2. Label elements

Labeling according Regulation (EC) No 1272/2008 [CLP]

Pictogram none Signal word none
Hazard statement none
Precautionary statement none
Supplemental hazard statements none

2.3. Other hazards No data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances See section 3.2

3.2. Mixtures

Component	Classification	Percentage
Proprietary formulation; no hazardous components above 1% or carcinogens above 0.1%		
CAS-No. No data available. EINECS -No. No data available.	Not classified	100%
5-bromo-5-nitro-1,3dioxane, MW: C₄H₆BrNO₄		

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



CAS-No. 30007-47-7 EINECS -No. 250-001-7	C, R 19/34/41 S 36	0.01%
Tris(hydroxymethyl)-aminomethane MW: $\text{NH}_2\text{C}(\text{CH}_2\text{OH})_3$		
CAS-No. 77-86-1 EINECS-No. 201-064-4	Xi, R36/38	0.3%
2-Morpholinoethanesulfonic acid MW: $\text{C}_6\text{H}_{13}\text{NO}_4\text{S} \cdot x\text{H}_2\text{O}$		
CAS-No. 145224-94-8 EINECS-No. 224-632-3	-	1.1%

For the full text of the H-statements and R-phrases mentioned in this section, see section 16.

4. FIRST AID MEASURES

4.1. Description of the first aid measures

General advice

Consult a physician, show this safety data sheet to the doctor in attendance.

If inhaled

Remove victim from the origin of exposure to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Contact a physician.

In case of skin contact

Avoid contact with skin. Remove contaminated clothes, wash immediately with plenty of water.

In case of eye contact

Avoid contact with eyes. Flush eyes immediately with plenty of water for 15 minutes.

If swallowed

After ingestion rinse mouth several times with plenty of water, give extensive water for drinking, contact a physician.

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

No data available.

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

No data available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media Suitable extinguishing media

In case of fire use water spray (fog), foam or dry powder. Use in accordance to the surroundings.

5.2. Special hazards arising from the substance or mixture

The substance may be combustible at high temperature. Combustion products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂ ...), halogenated compounds, hydrogen bromide gas.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



5.4. Further information No data available.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency

procedures Avoid contact with the preparation. Don't inhale vapours or atomized spray. Assure adequate air ventilation

6.2. Environmental precautions

Use appropriate tools to put the spilled substances in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

6.3. Methods and materials for containment and cleaning up

Absorb with liquid absorbing material (sand, diatomine, universal binders). Forward to disposal. Clean affected area with plenty of water.

6.4. Reference to other sections No data available.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Refer to SPECIFIC SECTION material safety data sheet NO. 3, point 8 *EXPOSURE CONTROLS/PERSONAL PROTECTION* for recommended precautionary measures when handling CONJ.

7.2. Conditions for safe storage, including any incompatibilities Store refrigerated 2-8°C.

7.3. Specific end uses No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace parameters

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200): None

Exposure Limits:

OSHA PEL: none established.

ACGIH TLV: none established.

ENGINEERING CONTROLS: Not respirable as a liquid.

8.2. Expose controls

Appropriate engineering controls

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

8.3. Personal protective equipment

Eye/face protection

Safety goggles or glasses with side shields.

Skin protection

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



Wear a lab coat. Change contaminated clothes immediately. After handling wash hands with soap and water.

Respiratory protection

Avoid inhaling vapour and spray fog. Breathing protection not necessary.

General hygiene controls

Practice good chemical hygiene when handling.

Avoid contact with eyes, skin and clothing.

Do not ingest material.

Safety shower and eyewash station available near location of use.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- a) Appearance form: clear, red liquid
- b) Odour: characteristic
- c) Physical state: liquid
- d) pH: 7.2 ± 0.2
- e) Melting point/freezing point: no data available.
- f) Initial boiling point and boiling range: no data available.
- g) Flash point: no data available.
- h) Evaporation rate: no data available.
- i) Flammability (solid, gas): no data available.
- j) Upper/lower flammability or explosive limits: no data available.
- k) Vapour pressure: no data available.
- l) Vapour density: no data available.
- m) Relative density: no data available.
- n) Water solubility: soluble
- o) Partition coefficient: n-octanol/water: no data available.
- p) Auto-ignition temperature: no data available.
- q) Decomposition temperature: no data available.
- r) Viscosity: no data available.
- s) Explosive properties: no data available.
- t) Oxidizing properties: no data available.

9.2. Other safety information No data available.

10. STABILITY AND REACTIVITY

10.1. Reactivity

Reactive with oxidizing agents.

10.2. Chemical stability

Chemically stable under recommended conditions of use and storage.

10.3. Possibility of hazardous reactions No data available.

10.4. Conditions to avoid

Excess heat and incompatible materials.

The substance is sensitive to light

10.5. Incompatible materials No data available.

10.6. Hazardous decomposition products No data available.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Though complete toxicity information on CONJ is not available, none of its components are known to be toxic or hazardous at used concentrations. No component of this product contains levels greater than or equal to 0.1% which is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA. The product contains 5-bromo-5-nitro-1,3-dioxane (0.2%), which can produce adverse health effects in its concentrated forms.

Acute toxicity

5-bromo-5-nitro-1,3-dioxane:

Acute oral toxicity (LD50): 455 mg/kg [rat], 590 mg/kg [mouse]

Skin corrosion/irritation

No data available.

Serious eye damage/eye irritation

No data available.

Respiratory or skin

sensitization No data available.

Germ cell mutagenicity No data available.

Carcinogenicity

No component of this product contains levels greater than or equal to 0.1% which is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

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

Skin: May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May cause mucous membrane irritation.

Inhalation: May cause respiratory tract irritation.

Additional information

May affect behavior/central nervous system (tremor, convulsions, excitement). Further dangerous properties cannot be ruled out. The preparation must be handled with the usual care for chemicals.

12. ECOLOGICAL INFORMATION

12.1. Toxicity No data available.

12.2. Persistence and degradability No data available.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



- 12.3. Bio-accumulative 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

The waste produced from utilizing the preparation and the unused preparation should be disposed of according to the prevailing regulations and guidelines of the agencies holding jurisdiction over the laboratory, and the regulations of each country. The disposal of liquid effluents should be carried out according to the existing local laws and to the existing local regulation governing water pollution.

14. TRANSPORT INFORMATION

14.1. UN number

Non-regulated, non-hazardous for transport.

14.2. UN proper shipping name

Non-regulated, non-hazardous for transport.

14.3. Transport hazard class(es)

Non-regulated, non-hazardous for transport.

14.4. Packaging group

Non-regulated, non-hazardous for transport.

14.5. Environmental hazards

No data available.

14.6. Reportable quantity (RQ)

No data available.

14.7. Emergency telephone number (during transport)

CHEMTREC: 1-800-424-9300 (US and Canada)
1-703-527-3887 (International shipments)

14.8. Special precautions for user

No data available.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



15. REGULATORY INFORMATION US FEDERAL REGULATIONS

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE
COMPENSATION, AND LIABILITY ACT): not applicable.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION
ACT): not listed.

INTERNATIONAL REGULATIONS

There are no hazardous ingredients in an amount that requires
identification and labeling according to European Community Directives.

EUROPEAN UNION'S REACH (REGISTRATION, EVALUATION, AND AUTHORIZATION OF CHEMICALS):

This product meets the definition of a preparation. The aggregate volume of
each non-exempt substance in this product does not exceed the 1 metric ton
per year threshold. Therefore, registration is not required.

This safety data sheet has been prepared to comply with the requirements of Annex
II, European Community Regulation No. 1907/2006 (REACH) and ANSI Z400.1-
2004 guidelines.

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

No data available.

15.2. Chemical Safety assessment No data available.

16. OTHER INFORMATION

Text of H-code(s) and R-phrases(s) mentioned in Section 3

classification	number	description
C		corrosive
Xn		harmful
N		environmental hazard
R	22	Harmful by inhalation, in contact with skin and if swallowed.
	38	Irritating to skin.
	50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S	24	Avoid contact with skin.
	25	Aoid contact with eyes.
	36	Wear suitable protecting clothes.

Further information

The above information is believed to be correct but does not purport to be all inclusive
and shall be used only as a guide. The information in this document is based on the
present state of our knowledge and is applicable to the product with regard to appropriate
safety precautions. It does not represent any guarantee of the properties of the product.
Biomedica Medizinprodukte GmbH & Co KG shall not be held liable for any damage
resulting from handling or from contact with the above product. See reverse side of
invoice or packing slip for additional terms and conditions of sale **SPECIFIC SECTION**

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



Material safety data sheet no.5

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Kit component name: Assay buffer
Component ID: ASYBUF
Brand: Biomedica Medizinprodukte GmbH & Co KG

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

Identified uses: AS A SINGLE COMPONENT FOR RESEARCH USE ONLY

1.3. Details of the supplier of the data sheet

Company: Biomedica Medizinprodukte GmbH & Co KG, A-1210 Wien,
Divischgasse 4
Telephone: +43/1/291 07 45
Fax: +43/1/291 07 85
E-mail: export@bmgrp.com

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

2.2. Label elements

Labeling according Regulation (EC) No 1272/2008 [CLP]

Pictogram none Signal word none
Hazard statement none
Precautionary statement none
Supplemental hazard statements none

2.3. Other hazards No data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

See section 3.2

3.2. Mixtures

Aqueous solution of $\text{Na}_2\text{HPO}_4 \cdot 7\text{H}_2\text{O}$, KH_2PO_4 , KCl, NaCl, sterile goat serum, sterile human serum, Tween20, Lithium Heparin, EDTA and Proclin 300, Proclin 300 as preservative.

Dangerous components:

Component	Classification	Concentration/percentage
Proprietary formulation; no hazardous components above 1% or carcinogens above 0.1%		
CAS-No. None EINECS -No. none	Not classified	100%

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



Boric acid , MW: H_3BO_3		
CAS-No. 10043-35-3 EC-No. 233-139-2	T R 60-61 S 53	0.31%
Sodium tetraborate , MW: $\text{B}_4\text{Na}_2\text{O}_7$		
CAS-No. 1330-43-4 EC-No. 215-540-4	T R 60-61	0.02%
Probumin from bovine serum		
CAS-No.9048-46-8 EC-No. 232-936-2	-	1 %
Proclin 300		
CAS-No.7732-18-5 EC-No. 231-791-2	R2/21/22-34-43 R51/53	0.1%
Water		
CAS-No.7732-18-5 EC-No. 231-791-2	-	98.57%

For the full text of the H-statements and R-phrases mentioned in this section, see section 16.

4. FIRST AID MEASURES

4.1. Description of the first aid measures

General advice

Consult a physician, show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person to fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off immediately with soap and plenty of water.

In case of eye contact

Rinse thoroughly with plenty of water, also under the eyelids.

If swallowed

Never give anything by mouth to an unconscious person. Call a physician.

4.2. Most important symptoms and effects, both acute and delayed No data available.

4.3. Indication of any immediate medical attention and special treatment needed No data available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

No restriction. Use appropriate agent for surrounding fire.

5.2. Special hazards arising from the substance or mixture Nature of decomposition products not known.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

5.4. Further information No data available.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures Use personal protective equipment.

6.2. Methods and materials for containment and cleaning up Soak up with inert absorbent material. Do not let product enter drains.

6.3. Reference to other sections No data available.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling No special handling advice required.

7.2. Conditions for safe storage, including any incompatibilities Keep in properly labeled containers.; Store at 2-8°C.

VbF-Class: not applicable.

7.3. Specific end uses No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace parameters

No data available.

8.2. Expose controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas.

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

8.3. Personal protective equipment Eye/face protection

Tightly fitting safety goggles.

Skin protection

Handle with chemical-resistance gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance form: liquid

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



b) Colour:	clear - yellowish
c) Odour:	characteristic
d) pH:	6.9 – 7.1
e) Melting point/freezing point:	no data available.
f) Initial boiling point and boiling range:	no data available.
g) Flash point:	no data available.
h) Evapour ation rate:	no data available.
i) Flammability (solid, gas):	no applicable
j) Upper/lower flammability or explosive limits:	no applicable
k) Vapour pressure:	no data available.
l) Vapour density:	no data available.
m) Relative density:	no data available.
n) Water solubility:	complete
o) Partition coefficient: n-octanol/water:	no data available.
p) Auto-ignition temperature:	no applicable
q) Decomposition temperature:	no data available.
r) Viscosity:	no data available.
s) Explosive properties:	not explosive
t) Oxidizing properties:	no data available.

9.2. Other safety information No data available.

10. STABILITY AND REACTIVITY

10.1. Reactivity

Hazardous polymerization: will not occur.

10.2. Chemical stability

Chemically stable under recommended conditions of use and storage.

10.3. Possibility of hazardous reactions No data available.

10.4. Conditions to avoid No data available.

10.5. Incompatible materials No data available.

10.6. Hazardous decomposition products No data available.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Though complete toxicity information on ASYBUF is not available, none of its components are known to be toxic or hazardous at used concentrations. No component of this product contains levels greater than or equal to 0.1% which is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA. The product contains Tween20 (0.1%), which can produce adverse health effects in its concentrated forms.

Acute toxicity

Boric Acid:

Acute Oral Toxicity (LD50): 2.660 mg/kg [rat]

Sodium tetraborate:

LD50 Oral - rat - 2.400 - 2.600 mg/kg

LD50 Dermal - rabbit - > 2.000 mg/kg,

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



Skin corrosion/irritation

No data available.

Serious eye damage/eye irritation

No data available.

Respiratory or skin sensitization

No data available.

Germ cell

mutagenicity No data
available.

Carcinogenicity

No data available.

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.

Additional information

No data available.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Though complete toxicity information on ASYBUF is not available, none of its components are known to be toxic or hazardous at used concentrations. No component of this product contains levels greater than or equal to 0.1% which is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA. The product contains Tween20 (0.1%), which can produce adverse health effects in its concentrated forms.

Polyoxyethylene (20) sorbitan monolaurate:
Toxicity (LC50): 350 mg/l for 24h [fish],

12.2. Persistence and degradability No
data available.

12.3. Bio-accumulative 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

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



13.1. Waste treatment methods

Product

Prevent product from entering drains. Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

14.1. UN number

Non-regulated, non-hazardous for transport.

14.2. UN proper shipping name

Non-regulated, non-hazardous for transport.

14.3. Transport hazard class(es)

Non-regulated, non-hazardous for transport.

14.4. Packaging group

Non-regulated, non-hazardous for transport.

14.5. Environmental hazards

No data available.

14.6. Reportable Quantity (RQ)

No data available.

14.7. Emergency Telephone Number (during transport)

CHEMTREC:
1-800-424-9300 (US and Canada)

1-703-527-3887 (International shipments)

14.8. Special precautions for user

No data available.

15. REGULATORY INFORMATION US FEDERAL REGULATIONS

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION, AND LIABILITY ACT): not applicable.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): not listed.

INTERNATIONAL REGULATIONS

There are no hazardous ingredients in an amount that requires identification and labeling according to European Community Directives.

EUROPEAN UNION'S REACH (REGISTRATION, EVALUATION, AND AUTHORIZATION OF CHEMICALS):

This product meets the definition of a preparation. The aggregate volume of each non-exempt substance in this product does not exceed the 1 metric ton per year threshold. Therefore, registration is not required.

This safety data sheet has been prepared to comply with the requirements of Annex II, European Community Regulation No. 1907/2006 (REACH) and ANSI Z400.1-2004 guidelines.

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

No data available.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



15.2. Chemical safety assessment No data available.

16. OTHER INFORMATION

Text of H-code(s) and R-phrases(s) mentioned in Section 3

classification	number	description
T		Toxic
R	2	Risk of explosion by shock, friction, fire or other source of ignition
	21	Harmful in contact with skin
	22	Harmful if swallowed
	34	Causes burns
	35	Causes severe burns
	36	Irritating to eyes
	37	Irritating to respiratory system
	38	Irritating to skin
	41	Risk of serious damage to eyes
	43	May cause sensitization by skin contact
	51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
	60	May impair fertility
	61	May cause harm to the unborn child
S	53	Avoid exposure - obtain special instructions before use.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Biomedica Medizinprodukte GmbH & Co KG shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



SPECIFIC SECTION

Material safety data sheet no.5

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Kit component name: Standard
Component ID: STD
Kit component name: Control
Component ID: CTRL
Brand: Biomedica Medizinprodukte GmbH & Co KG

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

Identified uses: AS A SINGLE COMPONENT FOR RESEARCH USE ONLY

1.3. Details of the supplier of the data sheet

Company: Biomedica Medizinprodukte GmbH & Co KG, A-1210 Wien,
Divischgasse 4
Telephone: +43/1/291 07 45
Fax: +43/1/291 07 85
E-mail: export@bmgrp.com

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

2.2. Label elements

Labeling according Regulation (EC) No 1272/2008 [CLP]

The product does not need to be labeled in accordance with EC directives or respective national laws.

2.3. Other hazards No data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances See section 3.2

3.2. Mixtures

Aqueous solution of human serum with Aprotinin and Proclin 300,
Proclin 300 as preservative.
Aprotinin inhibits several serine proteases (prevents both intrinsic pathway of coagulation and fibrinolysis).

Component	Classification	Percentage
human serum		
-	-	98.9%

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



Aprotinin		
CAS-No.9087-70-1	Xn R42/43 S36	1%
Proclin 300		
CAS-No.7732-18-5 EC-No. 231-791-2	R2/21/22-34-43 R51/53	0.1%

4. FIRST AID MEASURES

4.1. Description of the first aid measures

General advice

Consult a physician, show this safety data sheet to the doctor in attendance.

If inhaled

Move to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

In case of skin contact

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

In case of eye contact

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

If swallowed

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

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

No data available.

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

No data available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Suitable: Use extinguishing media appropriate to surrounding fire conditions.

5.2. Special hazards arising from the substance or mixture

Nature of decomposition products not known.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

5.4. Further information

No data available.

6. ACCIDENTAL RELEASE MEASURES

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



6.1. Personal precautions, protective equipment and emergency procedures Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

6.2. Methods and materials for containment and cleaning up
Sweep up, place in a bag and store for waste disposal. Avoid raising dust. Wash spill site with 10% bleach and ventilate area after material pickup is complete.

6.3. Reference to other sections No data available.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

7.2. Conditions for safe storage, including any incompatibilities

Conditions of storage: Keep tightly closed. Store at < -25°C after reconstitution.

7.3. Specific end uses No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace parameters

No data available.

8.2. Expose controls

ENGINEERING CONTROLS:

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES:

Wash thoroughly after handling.

8.3. Personal protective equipment:

Respiratory protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand protection: Compatible chemical-resistant gloves.

Eye protection: Chemical safety goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

- a) Appearance form: lyophilised
- b) Colour: clear - yellowish
- c) Odour: characteristic
- d) pH: no data available.
- e) Melting point/freezing point: no data available.
- f) Initial boiling point and boiling range: no data available.
- g) Flash point: no data available.
- h) Evapour ation rate: no data available.
- i) Flammability (solid, gas): no data available.
- j) Upper/lower flammability or explosive limits: no data available.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



- k) Vapour pressure: no data available.
- l) Vapour density: no data available.
- m) Relative density: no data available.
- n) Water solubility: no data available.
- o) Partition coefficient: n-octanol/water: no data available.
- p) Auto-ignition temperature: no data available.
- q) Decomposition temperature: no data available.
- r) Viscosity: no data available.
- s) Explosive properties: no data available.
- t) Oxidizing properties: no data available.

9.2. Other safety information No data available.

10. STABILITY AND REACTIVITY

10.1. Reactivity

Hazardous polymerization: will not occur.

10.2. Chemical stability

Chemically stable under recommended conditions of use and storage.

10.3. Possibility of hazardous reactions No data available.

10.4. Conditions to avoid Strong oxidizing agents

10.5. Incompatible materials No data available.

10.6. Hazardous decomposition products Nature of decomposition products not known.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects Acute toxicity

No data available.

Skin corrosion/irritation

Skin contact: May cause skin irritation.

Skin absorption: May be harmful if absorbed through the skin. **Serious eye damage/eye irritation** May cause eye irritation.

Respiratory or skin sensitization

Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled. **Germ cell mutagenicity** No data available.

Carcinogenicity

No data available.

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.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



Additional information

May be harmful if
swallowed.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

No data available.

**12.2. Persistence and
degradability** No data
available.

**12.3. Bio-accumulative
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 Product

Contact a licensed professional waste disposal service to dispose of this material. Disposal should be made in accordance with existing disposal practices employed for infectious waste at your institution. Observe all federal, state, and local environmental regulations.

14. TRANSPORT INFORMATION

14.1. UN number

Non-regulated, non-hazardous for transport.

14.2. UN proper shipping name

Non-regulated, non-hazardous for transport.

14.3. Transport hazard class(es)

Non-regulated, non-hazardous for transport.

14.4. Packaging group

Non-regulated, non-hazardous for transport.

14.5. Environmental hazards No
data available.

14.6. Reportable Quantity (RQ)
No data available.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



**14.7. Emergency Telephone
Number (during transport)**
CHEMTREC: 1-800-424-
9300 (US and Canada)
1-703-527-3887 (International shipments)

**14.8. Special precautions for
user** No data available.

15. REGULATORY INFORMATION

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: B Biohazard.

Not hazardous according to Directive 67/548/EEC.

Caution: Substance not yet fully tested (EU).

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 3

Self-Classification

**15.1. Safety, health and
environmental
regulations/legislation
specific for the substance
or mixture** No data
available.

**15.2. Chemical safety
assessment** No data
available.

16. OTHER INFORMATION

Text of H-code(s) and R-phrases(s) mentioned in Section 3

classification	number	description
Xn		harmful
R	2	Risk of explosion by shock, friction, fire or other source of ignition.
	21	Harmful in contact with skin.
	22	Harmful if swallowed.
	34	Causes burns.
	42	May cause sensitization by inhalation.
	43	May cause sensitization by skin contact.
	51	Toxic to aquatic organisms.
	53	Harmful to aquatic organisms.
S	36	Wear suitable protective clothing.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Biomedica Medizinprodukte GmbH & Co KG shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

SPECIFIC SECTION

Material safety data sheet no.7

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifiers

Kit component name: Wash buffer concentrate 20x
Component ID: WASHBUF
Brand: Biomedica Medizinprodukte GmbH & Co KG

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

Identified uses: AS A SINGLE COMPONENT FOR RESEARCH USE ONLY

1.3. Details of the supplier of the data sheet

Company: Biomedica Medizinprodukte GmbH & Co KG, A-1210 Wien,
Divischgasse 4
Telephone: +43/1/291 07 45
Fax: +43/1/291 07 85
E-mail: export@bmgrp.com

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

2.2. Label elements

Labeling according Regulation (EC) No 1272/2008 [CLP]

The product does not need to be labeled in accordance with EC directives or respective national laws.

2.3. Other hazards No data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances See section 3.2

3.2. Mixtures

Aqueous solution of $\text{Na}_2\text{HPO}_4 \cdot 7\text{H}_2\text{O}$, KH_2PO_4 , KCl, NaCl with Triton-X and Proclin 300, Proclin 300 as preservative

Component	Classification	Percentage
-----------	----------------	------------

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



Sodium Chloride MW: NaCl		
CAS-No.7647-14-5 EC-No. 231-598-3	-	16%
4-(1,1,3,3-Tetramethylbutyl)phenyl-polyethylene glycol MW: (C ₂ H ₄ O) _n C ₁₄ H ₂₂ O		
CAS-No.9002-93-1 EC-No.	Xn, N, C, H302/318/411 P273/280/305/351/338	2%
	R22/41/51/53 S26/39/61	
Proclin 300		
CAS-No.7732-18-5 EC-No. 231-791-2	R2/21/22-34-43 R51/53	0.08%

4. FIRST AID MEASURES

4.1. Description of the first aid measures

General advice

Consult a physician, show this safety data sheet to the doctor in attendance.

If inhaled

Move to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

In case of skin contact

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

In case of eye contact

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

If swallowed

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

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

Vomiting, diarrhoea, dehydration and congestion may occur in internal organs. Hypertonic salt solutions can produce inflammatory reactions in the gastrointestinal tract.

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

No data available.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Use extinguishing media appropriate to surrounding fire conditions.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



5.2. Special hazards arising from the substance or mixture Hydrogen, chloride gas, sodium oxides.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

5.4. Further information No data available.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with the preparation. Do not inhale vapours or atomized spray. Be assured of adequate air ventilation.

6.2. Environmental precautions

Use appropriate tools to put the spilled substances in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

6.3. Methods and materials for containment and cleaning up

Absorb with liquid absorbing material (sand, diatomite, universal binders). Forward to disposal. Clean affected area with plenty of water.

6.4. Reference to other sections No data available.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Refer to SPECIFIC SECTION Material Safety Data Sheet NO.3, point 8 *EXPOSURE CONTROLS/PERSONAL PROTECTION* for recommended precautionary measures when handling WASHBUF.

7.2. Conditions for safe storage, including any incompatibilities Store refrigerated 2-8°C.

7.3. Specific end uses No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace parameters

No data available.

8.2. Expose controls

ENGINEERING CONTROLS:

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES:

Wash thoroughly after handling.

8.3. Personal protective equipment:

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



Respiratory protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand protection: Compatible chemical-resistant gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Eye protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance form:	liquid
b) Colour:	clear - yellowish
c) Odour:	characteristic
d) pH:	7.4 ± 0.1
e) Melting point/freezing point:	no data available.
f) Initial boiling point and boiling range:	no data available.
g) Flash point:	no data available.
h) Evaporation rate:	no data available.
i) Flammability (solid, gas):	no data available.
j) Upper/lower flammability or explosive limits:	no data available.
k) Vapour pressure:	no data available.
l) Vapour density:	no data available.
m) Relative density:	no data available.
n) Water solubility:	no data available.
o) Partition coefficient: n-octanol/water:	no data available.
p) Auto-ignition temperature:	no data available.
q) Decomposition temperature:	no data available.
r) Viscosity:	no data available.
s) Explosive properties:	no data available.
t) 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 No data available.

10.3. Possibility of hazardous reactions No data available.

10.4. Conditions to avoid No data available.

10.5. Incompatible materials Strong oxidizing agents.

10.6. Hazardous decomposition products Nature of decomposition products not known.

11. TOXICOLOGICAL INFORMATION

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



11.1. Information on toxicological effects Acute toxicity

Sodium Chloride:

Acute oral toxicity (LD50): 3000 mg/kg [rat]

4-(1,1,3,3-Tetramethylbutyl)phenyl-polyethylene glycol:

Acute oral toxicity (LD50): 707 mg/kg [rat, female]

Acute oral toxicity (LD50): 500 mg/kg [rat, male]

Skin corrosion/irritation

Skin contact: May cause skin irritation.

Skin absorption: May be harmful if absorbed through the skin.

Serious eye damage/eye irritation

May cause eye irritation

Respiratory or skin sensitization

Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

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.

Additional information

May be harmful if swallowed.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Sodium chloride:

Acute toxicity (LC50): 1294.6 mg/l – 96h [Lepomis macrochirus]

Acute toxicity (LC50): 1661 mg/l – 48h [Daphnia magna] 4-

(1,1,3,3-Tetramethylbutyl)phenyl-polyethylene glycol:

Acute toxicity (LC50): 8.9 mg/l – 96h [Pimephales promelas]

Acute toxicity (LC50): 26 mg/l – 48h [Daphnia magna]

12.2. Persistence and degradability No data available.

12.3. Bio-accumulative potential No data available.

12.4. Mobility in soil No data available.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



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 Product

Contact a licensed professional waste disposal service to dispose of this material. Disposal should be made in accordance with existing disposal practices employed for infectious waste at your institution. Observe all federal, state, and local environmental regulations.

14. TRANSPORT INFORMATION

14.1. UN number
Non-regulated, non-hazardous for transport.

14.2. UN proper shipping name
Non-regulated, non-hazardous for transport.

14.3. Transport hazard class(es)
Non-regulated, non-hazardous for transport.

14.4. Packaging group
Non-regulated, non-hazardous for transport.

14.5. Environmental hazards No data available.

14.6. Reportable Quantity (RQ)
No data available.

14.7. Emergency Telephone Number (during transport)
CHEMTREC: 1-800-424-9300 (US and Canada)
1-703-527-3887 (International shipments)

14.8. Special precautions for user No data available.

15. REGULATORY INFORMATION

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES
No data available.

COUNTRY SPECIFIC INFORMATION
No data available.

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture No data available.

15.2. Chemical safety assessment No data available.

16. OTHER INFORMATION

Text of H-code(s) and R-phrases(s) mentioned in Section 3

classification	number	description
Xn		Harmful
N		environmental hazard.
C		Corrosive
H	302	Harmful if swallowed.
	318	Causes serious eye damage.
	411	Toxic to aquatic life with long lasting effects.
P	273	Avoid release to the environment.
	280	Wear protective gloves/ eye protection/ face protection.
	305/351/338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
R	2	Risk of explosion by shock, friction, fire or other source of ignition.
	21	Harmful in contact with skin.
	22	Harmful if swallowed.
	34	Causes burns.
	41	Risk of serious damage to eyes.
	43	May cause sensitization by skin contact.
	51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	39	Wear eye/face protection.
	61	Avoid release to the environment. Refer to special instructions/ Safety data sheets.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety

Safety Data Sheet

according to Regulation (EC) No.1907/2006 released
2012/03/02



precautions. It does not represent any guarantee of the properties of the product. Biomedica Medizinprodukte GmbH & Co KG shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.