Product code	Description
42559	**Semi-dry Blotting Buffer Kit**

Components:

400150	Buffer I
400151	Buffer II
400152	Buffer III

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*
SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name: Buffer I**

· **Article number:** 400150
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
SERVA Electrophoresis GmbH
Carl-Benz-Str. 7
D-69115 Heidelberg
Tel.: +49 6221 13840-0
FAX: +49 6221 13840-10
msds.info@serva.de

· **Information department:** Product Safety department Tel.: +49 6221 13840-35
· **1.4 Emergency telephone number:**
Medical Emergency Information in case of poisoning:
Poison Information Center Mainz - Phone: +49 (0) 6131 19240
(advisory service in German or English language)

*
SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

GHS08

STOT SE 1 H370 Causes damage to organs.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
· **Hazard pictograms** GHS08
· **Signal word** Danger

· **Hazard-determining components of labelling:**
methanol
· **Hazard statements**
H370 Causes damage to organs.
· **Precautionary statements**

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** PBT - assessment not available.
· **vPvB:** vPvB - assessment not available.

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Trade name: Buffer I

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*
SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**
· **Description:** Mixture of the substances listed below with harmless additions.

· **Dangerous components:**		
CAS: 67-56-1 EINECS: 200-659-6	methanol Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT SE 1, H370	15-30%
CAS: 77-86-1 EINECS: 201-064-4	trometamol Skin Irrit. 2, H315; Eye Irrit. 2, H319	2.5-7%

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation** Supply fresh air and to be sure call for a doctor.
· **After skin contact** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact**
Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist In case of complaints.
· **After swallowing**
Wash out mouth. Call a doctor immediately.
Do not induce vomiting!
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents**
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be formed, but not limited to:
Carbon monoxide and carbon dioxide
· **5.3 Advice for firefighters**
· **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling

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See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

*
SECTION 7: Handling and storage

· ***7.1 Precautions for safe handling*** *Ensure good ventilation/exhaustion at the workplace.*
· ***Information about protection against explosions and fires:*** *Keep ignition sources away - Do not smoke.*

· ***7.2 Conditions for safe storage, including any incompatibilities***
· ***Storage***
· ***Requirements to be met by storerooms and receptacles:*** *No special requirements.*
· ***Information about storage in one common storage facility:*** *Store away from oxidising agents.*
· ***Further information about storage conditions:***
Store under lock and key and with access restricted to technical experts or their assistants only.
Keep receptacle tightly sealed.
· ***7.3 Specific end use(s)*** *No further relevant information available.*

*
SECTION 8: Exposure controls/personal protection

· ***Additional information about design of technical systems:*** *No further data; see item 7.*

· ***8.1 Control parameters***

· **Components with limit values that require monitoring at the workplace:**	
67-56-1 methanol (15-30%)	
WEL	Short-term value: 333 mg/m³, 250 ppm Long-term value: 266 mg/m³, 200 ppm Sk

· ***Additional information:*** *The lists that were valid during the creation were used as basis.*

· ***8.2 Exposure controls***
· ***Personal protective equipment***
· ***General protective and hygienic measures***
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· ***Breathing equipment:***
Short term filter device:
Filter P3.
· ***Protection of hands:***
Protective gloves.
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 preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· ***Material of gloves***
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.
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 can not be calculated in advance and has therefore to be checked prior to the application.
· ***Penetration time of glove material***
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· ***For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:***
Neoprene gloves
Rubber gloves
· ***Eye protection:*** *Tightly sealed goggles.*
· ***Body protection:*** *Protective work clothing.*

*
SECTION 9: Physical and chemical properties

· ***9.1 Information on basic physical and chemical properties***	
· ***General Information***	
· ***Appearance:***	
Form:	*Solution*
Colour:	*Colourless*
· ***Odour:***	*Characteristic*
· ***Odour threshold:***	*Not determined.*
· ***pH-value at 20 °C:***	*10.7*
· ***Change in condition***	
Melting point/freezing point:	*undetermined*
Initial boiling point and boiling range:	*undetermined*
· ***Flash point:***	*Not applicable*
· ***Flammability (solid, gaseous)***	*Not applicable.*
· ***Ignition temperature:***	
Decomposition temperature:	*Not determined.*
· ***Self igniting:***	*Product is not selfigniting.*
· ***Explosive properties:***	*Product does not present an explosion hazard.*
· ***Explosion limits:***	
Lower:	*Not determined.*
Upper:	*Not determined.*
· ***Vapour pressure:***	*Not determined.*
· ***Density:***	*Not determined*
· ***Relative density***	*Not determined.*
· ***Vapour density***	*Not determined.*
· ***Evaporation rate***	*Not determined.*
· ***Solubility in / Miscibility with***	
Water:	*Fully miscible*
· ***Partition coefficient: n-octanol/water:***	*Not determined.*
· ***Viscosity:***	
dynamic:	*Not determined.*
kinematic:	*Not determined.*
· ***Solvent content:***	
Organic solvents:	*20.0 %*
· ***VOC %:***	*20.00 %*
· ***VOC g/l:***	*158.0 g/l*
· ***Solids content:***	*3.6 %*
· ***9.2 Other information***	*There are no more data available.*

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SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No further relevant informations available.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** In case of fire: See Section 5

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**		
67-56-1 methanol		
Oral	LD50	5600 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)
Inhalative	LC50/4h	83.9 mg/l (rat)
	LC50/96h	10800 mg/l (Forelle)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure**
Causes damage to organs.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

*
SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow product to reach ground water, water course or sewage system.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** PBT - assessment not available.
· **vPvB:** vPvB - assessment not available.
· **12.6 Other adverse effects** No further relevant information available.

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SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

SECTION 14: Transport information

· **14.1 UN-Number**	
· **ADR, IMDG, IATA**	Void
· **14.2 UN proper shipping name**	
· **ADR, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)**	
· **ADR, IMDG, IATA**	
· **Class**	Void
· **Label**	-
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	
· **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **National regulations**

· **Technical instructions (air):**

Class	Share in %
I	15-30

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.

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H331 Toxic if inhaled.
H370 Causes damage to organs.

· ***Department issuing SDS:*** *Product safety department*
· ***Contact:*** *+49 6221 13840-35*
· ***Abbreviations and acronyms:***
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
PBT: persistent, bioaccumulative, toxic substance (REACH)
vPvB: very persistent, very bioaccumulative substance (REACH)
REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
CLP: Regulation on classification, labelling and packaging of substances and mixtures
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
· **** Data compared to the previous version altered.***

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*
SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name: Buffer II**

· **Article number:** 400151
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
SERVA Electrophoresis GmbH
Carl-Benz-Str. 7
D-69115 Heidelberg
Tel.: +49 6221 13840-0
FAX: +49 6221 13840-10
msds.info@serva.de

· **Information department:** Product Safety department Tel.: +49 6221 13840-35
· **1.4 Emergency telephone number:**
Medical Emergency Information in case of poisoning:
Poison Information Center Mainz - Phone: +49 (0) 6131 19240
(advisory service in German or English language)

*
SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

GHS08

STOT SE 1 H370 Causes damage to organs.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
· **Hazard pictograms** GHS08
· **Signal word** Danger

· **Hazard-determining components of labelling:**
methanol
· **Hazard statements**
H370 Causes damage to organs.
· **Precautionary statements**
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P308+P311 IF exposed or concerned: Call a POISON CENTER/doctor.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** PBT - assessment not available.
· **vPvB:** vPvB - assessment not available.

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*
SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**
· **Description:** Mixture of the substances listed below with harmless additions.

· **Dangerous components:**		
CAS: 67-56-1 EINECS: 200-659-6	methanol Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT SE 1, H370	15-30%

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation** Supply fresh air and to be sure call for a doctor.
· **After skin contact** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact**
Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist In case of complaints.
· **After swallowing**
Wash out mouth. Call a doctor immediately.
Do not induce vomiting!
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents**
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be formed, but not limited to:
Carbon monoxide and carbon dioxide
· **5.3 Advice for firefighters**
· **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

*
SECTION 7: Handling and storage

· ***7.1 Precautions for safe handling*** *Ensure good ventilation/exhaustion at the workplace.*
· ***Information about protection against explosions and fires:*** *Keep ignition sources away - Do not smoke.*

· ***7.2 Conditions for safe storage, including any incompatibilities***
· ***Storage***
· ***Requirements to be met by storerooms and receptacles:*** *No special requirements.*
· ***Information about storage in one common storage facility:*** *Store away from oxidising agents.*
· ***Further information about storage conditions:***
Store under lock and key and with access restricted to technical experts or their assistants only.
Keep receptacle tightly sealed.
· ***7.3 Specific end use(s)*** *No further relevant information available.*

*
SECTION 8: Exposure controls/personal protection

· ***Additional information about design of technical systems:*** *No further data; see item 7.*

· ***8.1 Control parameters***

· ***Components with limit values that require monitoring at the workplace:***	
67-56-1 methanol (15-30%)	
WEL	*Short-term value: 333 mg/m³, 250 ppm* *Long-term value: 266 mg/m³, 200 ppm* *Sk*

· ***Additional information:*** *The lists that were valid during the creation were used as basis.*

· ***8.2 Exposure controls***
· ***Personal protective equipment***
· ***General protective and hygienic measures***
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· ***Breathing equipment:***
Short term filter device:
Filter P3.
· ***Protection of hands:***
Protective gloves.
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 preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· ***Material of gloves***
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.
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 can not be calculated in advance and has therefore to be checked prior to the application.
· ***Penetration time of glove material***
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· ***For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:***
Neoprene gloves
Rubber gloves
· ***Eye protection:*** *Tightly sealed goggles.*
· ***Body protection:*** *Protective work clothing.*

*

SECTION 9: Physical and chemical properties

· ***9.1 Information on basic physical and chemical properties***	
· ***General Information***	
· ***Appearance:***	
Form:	*Solution*
Colour:	*Colourless*
· ***Odour:***	*Characteristic*
· ***Odour threshold:***	*Not determined.*
· ***pH-value at 20 °C:***	*10.2*
· ***Change in condition***	
Melting point/freezing point:	*undetermined*
Initial boiling point and boiling range:	*undetermined*
· ***Flash point:***	*Not applicable*
· ***Flammability (solid, gaseous)***	*Not applicable.*
· ***Ignition temperature:***	
Decomposition temperature:	*Not determined.*
· ***Self igniting:***	*Product is not selfigniting.*
· ***Explosive properties:***	*Product does not present an explosion hazard.*
· ***Explosion limits:***	
Lower:	*Not determined.*
Upper:	*Not determined.*
· ***Vapour pressure:***	*Not determined.*
· ***Density:***	*Not determined*
· ***Relative density***	*Not determined.*
· ***Vapour density***	*Not determined.*
· ***Evaporation rate***	*Not determined.*
· ***Solubility in / Miscibility with***	
Water:	*Fully miscible*
· ***Partition coefficient: n-octanol/water:***	*Not determined.*
· ***Viscosity:***	
dynamic:	*Not determined.*
kinematic:	*Not determined.*
· ***Solvent content:***	
Organic solvents:	*20.0 %*
· ***VOC %:***	*20.00 %*
· ***VOC g/l:***	*158.0 g/l*
· ***Solids content:***	*0.4 %*
· ***9.2 Other information***	*There are no more data available.*

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SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No further relevant informations available.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** In case of fire: See Section 5

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**		
67-56-1 methanol		
Oral	LD50	5600 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)
Inhalative	LC50/4h	83.9 mg/l (rat)
	LC50/96h	10800 mg/l (Forelle)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure**
Causes damage to organs.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

*
SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** PBT - assessment not available.
· **vPvB:** vPvB - assessment not available.
· **12.6 Other adverse effects** No further relevant information available.

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SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** *Disposal must be made according to official regulations.*
· **Recommended cleansing agent:** *Water, if necessary with cleansing agents.*

SECTION 14: Transport information

· **14.1 UN-Number**	
· **ADR, IMDG, IATA**	*Void*
· **14.2 UN proper shipping name**	
· **ADR, IMDG, IATA**	*Void*
· **14.3 Transport hazard class(es)**	
· **ADR, IMDG, IATA**	
· **Class**	*Void*
· **Label**	-
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	*Void*
· **14.5 Environmental hazards:**	
· **Marine pollutant:**	*No*
· **14.6 Special precautions for user**	*Not applicable.*
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	*Not applicable.*

*

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **REGULATION (EC) No 1907/2006 ANNEX XVII** *Conditions of restriction: 3*

· **National regulations**

· **Technical instructions (air):**

Class	Share in %
I	*15-30*

· **Water hazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.*
· **15.2 Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H331 Toxic if inhaled.

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H370 Causes damage to organs.

· ***Department issuing SDS:*** *Product safety department*
· ***Contact:*** *+49 6221 13840-35*
· ***Abbreviations and acronyms:***
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
PBT: persistent, bioaccumulative, toxic substance (REACH)
vPvB: very persistent, very bioaccumulative substance (REACH)
REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
CLP: Regulation on classification, labelling and packaging of substances and mixtures
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
· **** Data compared to the previous version altered.***

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*
SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Trade name: Buffer III**

· **Article number:** 400152
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
· **Application of the substance / the mixture** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
SERVA Electrophoresis GmbH
Carl-Benz-Str. 7
D-69115 Heidelberg
Tel.: +49 6221 13840-0
FAX: +49 6221 13840-10
msds.info@serva.de

· **Information department:** Product Safety department Tel.: +49 6221 13840-35
· **1.4 Emergency telephone number:**
Medical Emergency Information in case of poisoning:
Poison Information Center Mainz - Phone: +49 (0) 6131 19240
(advisory service in German or English language)

*
SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

GHS08

STOT SE 1 H370 Causes damage to organs.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
· **Hazard pictograms** GHS08
· **Signal word** Danger

· **Hazard-determining components of labelling:**
methanol
· **Hazard statements**
H370 Causes damage to organs.
· **Precautionary statements**

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** PBT - assessment not available.
· **vPvB:** vPvB - assessment not available.

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SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**
· **Description:** Mixture of the substances listed below with harmless additions.

· **Dangerous components:**		
CAS: 67-56-1 EINECS: 200-659-6	methanol Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT SE 1, H370	15-30%

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation** Supply fresh air and to be sure call for a doctor.
· **After skin contact** Immediately wash with water and soap and rinse thoroughly.
· **After eye contact**
Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist In case of complaints.
· **After swallowing**
Wash out mouth. Call a doctor immediately.
Do not induce vomiting!
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents**
CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be formed, but not limited to:
Carbon monoxide and carbon dioxide
· **5.3 Advice for firefighters**
· **Protective equipment:** Wear self-contained respiratory protective device.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
· **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Store away from oxidising agents.
· **Further information about storage conditions:**
Store under lock and key and with access restricted to technical experts or their assistants only.
Keep receptacle tightly sealed.
· **7.3 Specific end use(s)** No further relevant information available.

*
SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **8.1 Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
67-56-1 methanol (15-30%)	
WEL	Short-term value: 333 mg/m³, 250 ppm Long-term value: 266 mg/m³, 200 ppm Sk

· **Additional information:** The lists that were valid during the creation were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment**
· **General protective and hygienic measures**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Breathing equipment:**
Short term filter device:
Filter P3.
· **Protection of hands:**
Protective gloves.
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 preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
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.
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 can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· ***For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:***
Neoprene gloves
Rubber gloves
· ***Eye protection:*** *Tightly sealed goggles.*
· ***Body protection:*** *Protective work clothing.*

*
SECTION 9: Physical and chemical properties

· ***9.1 Information on basic physical and chemical properties***	
· ***General Information***	
· ***Appearance:***	
Form:	*Solution*
Colour:	*Colourless*
· ***Odour:***	*Characteristic*
· ***Odour threshold:***	*Not determined.*
· ***pH-value at 20 °C:***	*9.4*
· ***Change in condition***	
Melting point/freezing point:	*undetermined*
Initial boiling point and boiling range:	*undetermined*
· ***Flash point:***	*Not applicable*
· ***Flammability (solid, gaseous)***	*Not applicable.*
· ***Ignition temperature:***	
Decomposition temperature:	*Not determined.*
· ***Self igniting:***	*Product is not selfigniting.*
· ***Explosive properties:***	*Product does not present an explosion hazard.*
· ***Explosion limits:***	
Lower:	*Not determined.*
Upper:	*Not determined.*
· ***Vapour pressure:***	*Not determined.*
· ***Density:***	*Not determined*
· ***Relative density***	*Not determined.*
· ***Vapour density***	*Not determined.*
· ***Evaporation rate***	*Not determined.*
· ***Solubility in / Miscibility with***	
Water:	*Fully miscible*
· ***Partition coefficient: n-octanol/water:***	*Not determined.*
· ***Viscosity:***	
dynamic:	*Not determined.*
kinematic:	*Not determined.*
· ***Solvent content:***	
Organic solvents:	*20.0 %*
· ***VOC %:***	*20.00 %*
· ***VOC g/l:***	*158.0 g/l*
· ***Solids content:***	*0.9 %*
· ***9.2 Other information***	*There are no more data available.*

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Trade name: Buffer III

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SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No further relevant informations available.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** In case of fire: See Section 5

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**		
67-56-1 methanol		
Oral	LD50	5600 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)
Inhalative	LC50/4h	83.9 mg/l (rat)
	LC50/96h	10800 mg/l (Forelle)

· **Primary irritant effect:**
· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure**
Causes damage to organs.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** PBT - assessment not available.
· **vPvB:** vPvB - assessment not available.
· **12.6 Other adverse effects** No further relevant information available.

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Trade name: Buffer III

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SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

SECTION 14: Transport information

· **14.1 UN-Number**	
· **ADR, IMDG, IATA**	Void
· **14.2 UN proper shipping name**	
· **ADR, IMDG, IATA**	Void
· **14.3 Transport hazard class(es)**	
· **ADR, IMDG, IATA**	
· **Class**	Void
· **Label**	-
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	
· **Marine pollutant:**	No
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

· **National regulations**

· **Technical instructions (air):**

Class	Share in %
I	15-30

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H331 Toxic if inhaled.

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H370 Causes damage to organs.

· ***Department issuing SDS:*** *Product safety department*
· ***Contact:*** *+49 6221 13840-35*
· ***Abbreviations and acronyms:***
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
PBT: persistent, bioaccumulative, toxic substance (REACH)
vPvB: very persistent, very bioaccumulative substance (REACH)
REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
CLP: Regulation on classification, labelling and packaging of substances and mixtures
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
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GHS: Globally Harmonised System of Classification and Labelling of Chemicals
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LC50: Lethal concentration, 50 percent
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PBT: Persistent, Bioaccumulative and Toxic
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Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
· **** Data compared to the previous version altered.***