

## Information about Compilation of Safety Data Sheets

**Product: Protein A Agarose Purification Kit**  
**Company: SeraCare Life Sciences**  
**Article number: 5710-0009**

All components of the aforementioned kit had been classified according to Regulation (EC) No. 1907/2006 (REACH) and to Regulation (EC) No. 1272/2008 (GHS/CLP).

For the kit components Protein A Agarose (article number 5710-0005) and Storage Buffer (article number 50-69-01), Safety Data Sheets had been compiled (enclosure).

For the remaining kit components Binding/Wash Buffer (article number 50-70-01) and Elution Buffer (article number 50-68-01), no Safety Data Sheets are required after classifications according to the Regulation (EC) No. 1907/2006 (REACH) and the Regulation (EC) No. 1272/2008 (GHS/CLP).

When handling the kit components, the general and specific safety precautions for laboratories and the corresponding directives have to be followed.

Date of issue: May 2017

**medac**

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**Safety data sheet  
according to 1907/2006/EC, Article 31**

Printing date 30.05.2017

Version number 2

Revision: 01.03.2017

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name:** Protein A Agarose**Article number:** 5710-0005**Registration number**

This product is a mixture (see chapter 3). Registration number(s) is/are not available for this substance/these substances as the substance(s) or its/their use are exempted from registration according to Article 2 REACH Regulation (EC) No. 1907/2006, the annual tonnage does not require registration or the registration is envisaged for a later registration deadline.

**1.2 Relevant identified uses of the substance or mixture and uses advised against****Sector of Use** SU24 Scientific research and development**Product category** PC21 Laboratory chemicals**Process category** PROC15 Use as laboratory reagent**Application of the substance / the mixture** Immunochemical reagent for detection / auxiliary reagent**Uses advised against** In-vitro diagnosis.**1.3 Details of the supplier of the safety data sheet****Manufacturer/Distributor:**

Manufacturer:

SeraCare Life Sciences (KPL)

910 Clopper Road

Gaithersburgh, Maryland 20878, USA

Distributor:

medac GmbH

Theaterstrasse 6

22880 Wedel, Germany

phone: +49 4103 8006-0

**Informing department:**

Product Safety

productsafety@medac.de

**1.4 Emergency telephone number:**

Giftinformationszentrum-Nord, Phone: ++49 551 19 240 (service in German and English, 24 hours permanently accessible).

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Flam. Liq. 3 H226 Flammable liquid and vapour.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008****Hazard pictograms**

GHS02

**Signal word** Warning**Hazard statements**

H226 Flammable liquid and vapour.

**Precautionary statements**

P210 Keep away from heat. - No smoking.

P233 Keep container tightly closed.

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**Labelling of packages where the contents do not exceed 125 ml  
Hazard pictograms**




GHS02

**Signal word** Warning**2.3 Other hazards** Void.**Results of PBT and vPvB assessment****PBT:** PBT assessment not available as chemical safety assessment not required/not conducted.**vPvB:** PBT assessment not available as chemical safety assessment not required/not conducted.

### SECTION 3: Composition/information on ingredients

**3.1. Chemical characterisation: substances** Not applicable. Product is a mixture.**3.2 Chemical characterisation: Mixtures****Description:** Immunochemical reagent / auxiliary reagent**Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5 RTECS: KQ 6300000	Ethanol	 Flam. Liq. 2, H225	10-20%
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**SVHC** Not applicable.**Additional information** For the wording of the listed H-phrases please refer to Section 16.

### SECTION 4: First aid measures

**4.1 Description of first aid measures****After inhalation**

Supply fresh air.

Seek medical treatment in case of complaints.

**After skin contact**

Remove contaminated clothes.

Clean contaminated areas with water and soap.

In case of symptoms call a physician.

**After eye contact**

Rinse eyes cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

In case of onset of symptoms consult doctor.

**After swallowing**

Rinse out mouth.

Let drink water (2 glasses maximum).

In case of disorders consult doctor.

**4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.**Information for doctor**

Show Safety Data Sheet.

Treatment according to symptoms.

**Danger** No further relevant information available.**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

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Trade name: Protein A Agarose

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing agents** CO<sub>2</sub>, foam or extinguishing powder.

**For safety reasons unsuitable extinguishing agents** For this mixture no limitations of extinguishing agents are given.

### 5.2 Special hazards arising from the substance or mixture

Combustible.

Pay attention to flaschback.

Vapours are heavier than air and may spread along floors.

In the event of fire development of dangerous fumes or vapours possible.

### 5.3 Advice for firefighters

#### Protective equipment:

In case of burning of a larger amount:

Stay in the danger area only with self-contained breathing apparatus.

Prevent skin and eye contact by keeping a safe distance or by wearing suitable protective clothing.

#### Additional information

Collect contaminated fire fighting water separately. It must not enter drains.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel:

Avoid reagent contact with eyes and skin.

Wear protective clothing.

Advice for emergency responders: Protective equipment: see Section 8.

### 6.2 Environmental precautions: Do not empty into drains.

### 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Collect the material and dispose of properly.

Afterwards clean with water and cleansing agent.

Ensure adequate ventilation.

### 6.4 Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Keep containers tightly sealed.

Open and handle container with care.

**Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.

### 7.2 Conditions for safe storage, including any incompatibilities No further relevant information available.

#### Storage

**Requirements to be met by storerooms and containers:** Store at +2 °C to +8 °C.

**Information about storage in one common storage facility:** Not required.

#### Further information about storage conditions:

Protect from heat and direct sunlight.

The indications are valid for the whole package.

**Storage class** Void.

### 7.3 Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## SECTION 8: Exposure controls/personal protection

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

### 8.1 Control parameters

**Components with critical values that require monitoring at the workplace:**

#### 64-17-5 Ethanol

WEL	Long-term value: 1920 mg/m <sup>3</sup> , 1000 ppm
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**DNELs** No further relevant information available.

**PNECs** No further relevant information available.

CAS No.	Designation of material	%	Type	Value	Unit
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**Additional Occupational Exposure Limit Values for possible hazards during processing:** Not applicable.

**Additional information:** The official lists that were valid during the compilation were used as basis.

### 8.2 Exposure controls

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See Section 7.

#### Personal protective equipment

##### General protective and hygienic measures

The usual precautionary measures should be adhered to in handling the chemicals.

Avoid contact with the eyes and skin.

Do not inhale vapours/aerosols.

Remove contaminated clothing immediately.

Do not eat or drink while working.

Keep away from food and beverages.

Wash hands during breaks and at the end of the work.

**Breathing equipment:** Not required.

**Protection of hands:** Disposable medical gloves (AQL 1.5).

##### Material of gloves

Nitrile rubber, NBR

Natural rubber, NR

Thickness 0.11 mm.

The product quality has to comply with DIN EN 455.

**Penetration time of glove material** Not applicable.

**For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:**

Product has not been designed for permanent contact.

**For the permanent contact gloves made of the following materials are suitable:**

Product has not been designed for permanent contact.

**For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Product has not been designed for permanent contact.

**As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Natural rubber, NR

Thickness: 0.11 mm.

**Eye protection:** Safety glasses (standard EN 166).

**Body protection:** Protective work clothing.

**Limitation and supervision of exposure into the environment** Do not empty into drains.

**Risk management measures** Void.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

**Appearance:**

**Form:** Suspension

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<b>Colour:</b>	Whitish
<b>Smell:</b>	Slightly alcoholic.
<b>Odour threshold:</b>	No information available.
<b>Important information on protection of health and environment, and on safety.</b>	No further relevant information available.

<b>pH-value at 20 °C:</b>	7.9-8.1
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<b>Change in condition</b>	
<b>Melting point/freezing point:</b>	No information available.
<b>Initial boiling point and boiling range:</b>	No information available.

<b>Flash point:</b>	36 °C
<b>Inflammability (solid, gaseous)</b>	Not applicable.
<b>Ignition temperature:</b>	425 °C
<b>Decomposition temperature:</b>	No information available.
<b>Self-inflammability:</b>	Not self-inflammable.
<b>Explosive properties:</b>	Not explosive.
<b>Critical values for explosion:</b>	
<b>Lower:</b>	Not applicable.
<b>Upper:</b>	Not applicable.
<b>Oxidising properties</b>	No information available.
<b>Steam pressure at 20 °C:</b>	57 hPa
<b>Density</b>	No information available.
<b>Relative density</b>	No information available.
<b>Vapour density</b>	No information available.
<b>Evaporation rate</b>	No information available.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Dispersible
<b>Partition coefficient: n-octanol/water:</b>	No information available.
<b>Viscosity:</b>	
<b>dynamic:</b>	No information available.
<b>kinematic:</b>	No information available.
<b>Solvent content:</b>	
<b>Organic solvents:</b>	<20 %
<b>Water:</b>	> 50 %
<b>Solids content:</b>	<55 %

<b>9.2 Other information</b>	No further relevant information available.
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## SECTION 10: Stability and reactivity

**10.1 Reactivity** The mixture is chemically not reactive.

**10.2 Chemical stability** The product is chemically stable under the indicated storage conditions.

**Thermax decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**10.3 Possibility of hazardous reactions** For these concentrations no relevant information available.

**10.4 Conditions to avoid:** Heat, flames, sparks.

**10.5 Incompatible materials:** For these concentrations no further relevant information available.

**10.6 Hazardous decomposition products:** None known.

**Additional information:** No further relevant information available.

## SECTION 11: Toxicological information

**11.1 Information on toxicological effects** Data on the toxicity of this mixture are not available.

**Acute toxicity** Based on available data, the classification criteria are not met.

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**LD/LC50 values that are relevant for classification:****64-17-5 Ethanol**

Oral	LD50	7060 mg/kg (rat)
Inhalative	LC50/4 h	2000 mg/l (rat)

**Specific symptoms in biological assay:** No further relevant information available.**Primary irritant effect:****Skin corrosion/irritation** Slight irritations possible.**Serious eye damage/irritation** Irritations possible.**after swallowing:** In this concentration no irritant effects known.**after inhalation:** In this concentrations no irritant effects known.**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**Other information (about experimental toxicology):** No further relevant information available.**Subacute to chronic toxicity:** No further relevant information available.**Additional toxicological information:** No further relevant information available.**Toxicokinetics, metabolism and distribution** No relevant information available.**Acute effects (acute toxicity, irritation and corrosivity)** No acute toxicity information available for this product.**Sensitisation** No sensitising effect known.**Repeated dose toxicity** The substance or mixture is not classified as specific target organ toxicant, repeated exposure.**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** No relevant information available.**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** Based on available data, the classification criteria are not met.**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.**Other information:** No further relevant information available.**Behaviour in environmental systems:****Components:** Accumulation in organisms is not to be expected.**12.3 Bioaccumulative potential** Bioaccumulation is not to be expected.**12.4 Mobility in soil** No data available.**Ecotoxicological effects:****Remark:** No further relevant information available.**Additional ecological information:****General notes:** Generally not hazardous for water.**12.5 Results of PBT and vPvB assessment****PBT:** Substance(s) does/do not meet the criteria for PBT according to Regulation (EC) No 1907/2006, Annex XIII.**vPvB:** Substance(s) does/do not meet the criteria for vPvB according to Regulation (EC) No 1907/2006, Annex XIII.**12.6 Other adverse effects** No relevant information available.**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

Product residues have to be disposed of according to the Waste Framework Directive as well as national and regional regulations in each of the latest versions.

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**Uncleaned packagings:**
**Recommendation:** Uncleaned packagings have to be disposed of in the same manner as the product residues.

### SECTION 14: Transport information

**14.1 UN-Number**
**ADR**

No dangerous good according to ADR special regulation 144 in the latest valid version.

**ADN**

-

**IMDG, IATA**

UN1170

**14.2 UN proper shipping name**
**ADR**

1170 ETHANOL (ETHYL ALCOHOL), mixture

**ADN**

-

**IMDG**

ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

**IATA**

ETHANOL SOLUTION

**14.3 Transport hazard class(es)**
**ADN/R Class:**

-

**IMDG, IATA**

**Class  
Label**

 3 Flammable liquids.  
3

**14.4 Packing group**
**IMDG, IATA**

III

**14.5 Environmental hazards:**
**Marine pollutant:**

No

**14.6 Special precautions for user**
**EMS Number:**

Not applicable.

F-E,S-D

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

**Transport/Additional information:**

 The transport regulations are cited according to international regulations and in the form applicable in Germany (GGVSE). Possible national deviations in other countries are not considered.  
THESE TRANSPORT REGULATIONS APPLY TO THE WHOLE PACKAGE!

**UN "Model Regulation":**

UN1170, ETHANOL (ETHYL ALCOHOL), mixture, 3, III

### SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
**Labelling according to Regulation (EC) No 1272/2008** See Section 2.

**Hazard pictograms** See Section 2.

**Signal word** See Section 2.

**Hazard-determining components of labelling:** See Section 2.

**Hazard statements** See Section 2.

**Precautionary statements** See Section 2.

**REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

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### National regulations

#### Information about limitation of use:

Take note of the directive on the protection of young people at work in the latest version.

Take note of the directive on the safety and health at work for pregnant and breast feeding mothers and workers of childbearing age in the latest version.

Class	Share in %
NK	19.0

**Water hazard class:** Generally not hazardous for water.

**Other regulations, limitations and prohibitive regulations** Void.

**Substances of very high concern (SVHC) according to REACH, Article 57** Not applicable.

**15.2 Chemical safety assessment:** A chemical safety assessment has not been carried out.

## SECTION 16: Other information

All information and recommendations are believed to be correct as of the date of this Safety Data Sheet but shall not be taken to be all inclusive and shall be used only as a guide. All chemicals and preparations may present unknown hazards and should be used with caution. medac shall not be held liable for any damage resulting from handling or from contact with the above product.

### Relevant phrases

H225 Highly flammable liquid and vapour.

**Department issuing data specification sheet:** Product Safety

**Contact:** productsafety@medac.de

**Replaces version from:** 20.08.2013

**Reason for alteration:** Change of contact address.

### 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

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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3

**Safety data sheet  
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Printing date 30.05.2017

Version number 2

Revision: 17.05.2017

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name:** Storage Buffer Solution**Article number:** 50-69-01**Registration number**

This product is a mixture (see chapter 3). Registration number(s) is/are not available for this substance/these substances as the substance(s) or its/their use are exempted from registration according to Article 2 REACH Regulation (EC) No. 1907/2006, the annual tonnage does not require registration or the registration is envisaged for a later registration deadline.

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

Relevant identified uses:

RUO (Research Use Only).

Uses advised against:

For in vitro diagnosis.

**Sector of Use** SU24 Scientific research and development**Product category** PC21 Laboratory chemicals**Process category** PROC15 Use as laboratory reagent**Application of the substance / the mixture** Immunochemical reagent for detection / auxiliary reagent**1.3 Details of the supplier of the safety data sheet****Manufacturer/Distributor:**

Manufacturer:

SeraCare Life Sciences (KPL)

910 Clopper Road

Gaithersburgh, Maryland 20878, USA

Distributor:

medac GmbH

Theaterstrasse 6

22880 Wedel, Germany

phone: +49 4103 8006-0

**Informing department:**

Product Safety

productsafety@medac.de

**1.4 Emergency telephone number:**

Giftinformationszentrum-Nord, Phone: ++49 551 19 240 (service in German and English, 24 hours permanently accessible).

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Flam. Liq. 3 H226 Flammable liquid and vapour.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008****Hazard pictograms**

GHS02

**Signal word** Warning**Hazard statements**

H226 Flammable liquid and vapour.

**Precautionary statements**

P210 Keep away from heat. - No smoking.

P233 Keep container tightly closed.

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Trade name: Storage Buffer Solution

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Labelling of packages where the contents do not exceed 125 ml

Hazard pictograms



GHS02

Signal word Warning

2.3 Other hazards Void.

Results of PBT and vPvB assessment

PBT: PBT assessment not available as chemical safety assessment not required/not conducted.

vPvB: PBT assessment not available as chemical safety assessment not required/not conducted.

### SECTION 3: Composition/information on ingredients

3.1. Chemical characterisation: substances Not applicable. Product is a mixture.

3.2 Chemical characterisation: Mixtures

Description: Immunochemical reagent / auxiliary reagent

Dangerous components:

CAS: 64-17-5 EINECS: 200-578-6 Index number: 603-002-00-5 RTECS: KQ 6300000	Ethanol	Flam. Liq. 2, H225	10-20%
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SVHC Not applicable.

Additional information For the wording of the listed H-phrases please refer to Section 16.

### SECTION 4: First aid measures

4.1 Description of first aid measures

**After inhalation**

Supply fresh air.

Seek medical treatment in case of complaints.

**After skin contact**

Remove contaminated clothes.

Clean contaminated areas with water and soap.

In case of symptoms call a physician.

**After eye contact**

Rinse eyes cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

In case of onset of symptoms consult doctor.

**After swallowing**

Rinse out mouth.

Let drink water (2 glasses maximum).

In case of disorders consult doctor.

4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

**Information for doctor**

Show Safety Data Sheet.

Treatment according to symptoms.

**Danger** No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

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Version number 2

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**Trade name: Storage Buffer Solution**

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**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents** CO<sub>2</sub>, foam or extinguishing powder.**For safety reasons unsuitable extinguishing agents** For this mixture no limitations of extinguishing agents are given.**5.2 Special hazards arising from the substance or mixture**

Combustible.

Pay attention to flaschback.

Vapours are heavier than air and may spread along floors.

In the event of fire development of dangerous fumes or vapours possible.

**5.3 Advice for firefighters****Protective equipment:**

In case of burning of a larger amount:

Stay in the danger area only with self-contained breathing apparatus.

Prevent skin and eye contact by keeping a safe distance or by wearing suitable protective clothing.

**Additional information**

Collect contaminated fire fighting water separately. It must not enter drains.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel:

Avoid reagent contact with eyes and skin.

Wear protective clothing.

Advice for emergency responders: Protective equipment: see Section 8.

**6.2 Environmental precautions:** Do not empty into drains.**6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Afterwards clean with water and cleansing agent.

Collect the material and dispose of properly.

Do not flush with water or aqueous cleansing agents

**6.4 Reference to other sections**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Keep containers tightly sealed.

Open and handle container with care.

**Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.**7.2 Conditions for safe storage, including any incompatibilities** No further relevant information available.**Storage****Requirements to be met by storerooms and containers:** Store at +2 °C to +8 °C.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** The indications are valid for the whole package.**Storage class** Storage class 3 (VCI) Inflammable liquids.**7.3 Specific end use(s)** Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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**Trade name: Storage Buffer Solution**

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## SECTION 8: Exposure controls/personal protection

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

### 8.1 Control parameters

**Components with critical values that require monitoring at the workplace:**

#### 64-17-5 Ethanol

WEL	Long-term value: 1920 mg/m <sup>3</sup> , 1000 ppm
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**DNELs** Not applicable.

**PNECs** Not applicable.

CAS No.	Designation of material	%	Type	Value	Unit
<b>Additional Occupational Exposure Limit Values for possible hazards during processing:</b> Not applicable.					

**Additional information:** The official lists that were valid during the compilation were used as basis.

### 8.2 Exposure controls

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See Section 7.

#### Personal protective equipment

##### General protective and hygienic measures

The usual precautionary measures should be adhered to in handling the chemicals.

Avoid contact with the eyes and skin.

Do not inhale vapours/aerosols.

Remove contaminated clothing immediately.

Do not eat or drink while working.

Keep away from food and beverages.

Wash hands during breaks and at the end of the work.

**Breathing equipment:** Not required.

**Protection of hands:** Disposable medical gloves (AQL 1.5).

##### Material of gloves

Nitrile rubber, NBR

Natural rubber, NR

Thickness 0.11 mm.

The product quality has to comply with DIN EN 455.

**Penetration time of glove material** Not applicable.

**For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:**

Product has not been designed for permanent contact.

**For the permanent contact gloves made of the following materials are suitable:**

Product has not been designed for permanent contact.

**For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Product has not been designed for permanent contact.

**As protection from splashes gloves made of the following materials are suitable:**

Nitrile rubber, NBR

Natural rubber, NR

Thickness: 0.11 mm.

**Eye protection:** Safety glasses (standard EN 166).

**Body protection:** Protective work clothing.

**Limitation and supervision of exposure into the environment** Do not empty into drains.

**Risk management measures** Void.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

**Appearance:**

**Form:** liquid

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<b>Colour:</b>	Colourless
<b>Smell:</b>	Slightly alcoholic.
<b>Odour threshold:</b>	No information available.
<b>Important information on protection of health and environment, and on safety.</b>	No further relevant information available.

<b>pH-value at 20 °C:</b>	7.9-8.1
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<b>Change in condition</b>	
<b>Melting point/freezing point:</b>	No information available.
<b>Initial boiling point and boiling range:</b>	No information available.

<b>Flash point:</b>	36 °C
<b>Inflammability (solid, gaseous)</b>	Not applicable.
<b>Ignition temperature:</b>	425 °C
<b>Decomposition temperature:</b>	No information available.
<b>Self-inflammability:</b>	Not self-inflammable.
<b>Explosive properties:</b>	Not explosive.
<b>Critical values for explosion:</b>	
<b>Lower:</b>	Not applicable.
<b>Upper:</b>	Not applicable.
<b>Oxidising properties</b>	No information available.
<b>Steam pressure at 20 °C:</b>	57 hPa
<b>Density</b>	No information available.
<b>Relative density</b>	No information available.
<b>Vapour density</b>	No information available.
<b>Evaporation rate</b>	No information available.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible.
<b>Partition coefficient: n-octanol/water:</b>	No information available.
<b>Viscosity:</b>	
<b>dynamic:</b>	No information available.
<b>kinematic:</b>	No information available.
<b>Solvent content:</b>	
<b>Organic solvents:</b>	20.0 %
<b>Water:</b>	>50
<b>Solids content:</b>	<22 %

<b>9.2 Other information</b>	No further relevant information available.
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## SECTION 10: Stability and reactivity

**10.1 Reactivity** The mixture is chemically not reactive.

**10.2 Chemical stability** The product is chemically stable under the indicated storage conditions.

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**10.3 Possibility of hazardous reactions** For these concentrations no relevant information available.

**10.4 Conditions to avoid:** Heat, flames, sparks.

**10.5 Incompatible materials:** For these concentrations no further relevant information available.

**10.6 Hazardous decomposition products:** None known.

**Additional information:** No further relevant information available.

## SECTION 11: Toxicological information

**11.1 Information on toxicological effects** Data on the toxicity of this mixture are not available.

**Acute toxicity** Based on available data, the classification criteria are not met.

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**LD/LC50 values that are relevant for classification:****64-17-5 Ethanol**

Oral	LD50	7060 mg/kg (rat)
Inhalative	LC50/4 h	20000 mg/l (rat)

**Specific symptoms in biological assay:** No further relevant information available.**Primary irritant effect:****Skin corrosion/irritation** Slight irritations possible.**Serious eye damage/irritation** Irritations possible.**after swallowing:** In this concentration no irritant effects known.**after inhalation:** In this concentrations no irritant effects known.**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**Other information (about experimental toxicology):** No further relevant information available.**Subacute to chronic toxicity:** No further relevant information available.**Additional toxicological information:** No further relevant information available.**Toxicokinetics, metabolism and distribution** No relevant information available.**Acute effects (acute toxicity, irritation and corrosivity)** No acute toxicity information available for this product.**Sensitisation** No sensitising effect known.**Repeated dose toxicity** The substance or mixture is not classified as specific target organ toxicant, repeated exposure.**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** No relevant information available.**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** Based on available data, the classification criteria are not met.**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.**Other information:** No further relevant information available.**Behaviour in environmental systems:****Components:** Accumulation in organisms is not to be expected.**12.3 Bioaccumulative potential** Bioaccumulation is not to be expected.**12.4 Mobility in soil** No data available.**Ecotoxicological effects:****Remark:** No further relevant information available.**Additional ecological information:****General notes:** Void.**12.5 Results of PBT and vPvB assessment****PBT:** Substance(s) does/do not meet the criteria for PBT according to Regulation (EC) No 1907/2006, Annex XIII.**vPvB:** Substance(s) does/do not meet the criteria for vPvB according to Regulation (EC) No 1907/2006, Annex XIII.**12.6 Other adverse effects** No relevant information available.**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

Product residues have to be disposed of according to the Waste Framework Directive as well as national and regional regulations in each of the latest versions.

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**Uncleaned packagings:****Recommendation:** Uncleaned packagings have to be disposed of in the same manner as the product residues.**SECTION 14: Transport information****14.1 UN-Number****ADR**

No dangerous good according to ADR special regulation 144 in the latest valid version.

**IMDG, IATA**

UN1170

**14.2 UN proper shipping name****IMDG**

ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), mixture

**IATA**

ETHANOL SOLUTION, mixture

**14.3 Transport hazard class(es)****IMDG, IATA****Class  
Label**3 Flammable liquids.  
3**14.4 Packing group****IMDG, IATA**

III

**14.5 Environmental hazards:****Marine pollutant:**

No

**14.6 Special precautions for user****EMS Number:**Not applicable.  
F-E,S-D**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

**Transport/Additional information:**The transport regulations are cited according to international regulations and in the form applicable in Germany (GGVSE). Possible national deviations in other countries are not considered.  
**THESE TRANSPORT REGULATIONS APPLY TO THE WHOLE PACKAGE!****UN "Model Regulation":**

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**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Labelling according to Regulation (EC) No 1272/2008** See Section 2.**Hazard pictograms** See Section 2.**Signal word** See Section 2.**Hazard-determining components of labelling:** See Section 2.**Hazard statements** See Section 2.**Precautionary statements** See Section 2.**Chemical safety assessment** A chemical safety assessment was not carried out.**REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

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### National regulations

#### Information about limitation of use:

Take note of the directive on the protection of young people at work in the latest version.

Take note of the directive on the safety and health at work for pregnant and breast feeding mothers and workers of childbearing age in the latest version.

Class	Share in %
NK	20.0

**Water hazard class:** Void.

**Other regulations, limitations and prohibitive regulations** Void.

**Substances of very high concern (SVHC) according to REACH, Article 57** Not applicable.

**15.2 Chemical safety assessment:** A chemical safety assessment has not been carried out.

## SECTION 16: Other information

All information and recommendations are believed to be correct as of the date of this Safety Data Sheet but shall not be taken to be all inclusive and shall be used only as a guide. All chemicals and preparations may present unknown hazards and should be used with caution. medac shall not be held liable for any damage resulting from handling or from contact with the above product.

### Relevant phrases

H225 Highly flammable liquid and vapour.

**Department issuing data specification sheet:** Product Safety

**Contact:** productsafety@medac.de

**Replaces version from:** 18.07.2014

**Reason for alteration:** Change of contact address.

### 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

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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Flammable liquids – Category 2

Flam. Liq. 3: Flammable liquids – Category 3