

10 / Dec / 2014

Manufacturer:

AJ Innuscreen GmbH
Robert-Rössle-Straße 10
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Distribution:

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Summary - Material Safety Data Sheet

Product: innuPREP Plant DNA Kit-IPC16

Summary may be subject to change – please inquire for update!

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.08.2014

Revision: 19.08.2014

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

Product identifier

Trade name: Content of InnuPure® C16 Strips/Plate C

Relevant identified uses of the substance or mixture and uses advised against:

No further relevant information available.

Application of the substance / the preparation: Buffer

Uses advised against: No further information available.

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

AJ Innuscreen GmbH
 Biotechnologie Campus Berlin-Buch
 Robert-Rössle-Straße 10
 13125 Berlin
 Germany
 Tel.: +49 (0) 30 9489-3380
 Fax: +49 (0) 30 9489-3381
 E-Mail: info@aj-innuscreen.de
 Internet: www.aj-innuscreen.de

Further information obtainable from: AJ Innuscreen GmbH

Emergency telephone number:

Poison Information Center / Vergiftungs-Informations-Zentrale
 Mathildenstraße 1
 79106 Freiburg
 Germany
 Tel.: +49 (0) 761 19 240
 Fax: +49 (0) 761 270 44 570
 E-Mail: giftinfo@uniklinik-freiburg.de
 Internet: www.giftberatung.de

2 Hazards identification

Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008:



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
 Acute Tox. 4 H312 Harmful in contact with skin.
 Acute Tox. 4 H332 Harmful if inhaled.
 STOT SE 3 H336 May cause drowsiness or dizziness.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

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Classification according to Directive 67/548/EEC or Directive 1999/45/EC:

C; Corrosive

R34: Causes burns.



Xn; Harmful

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.



F; Highly flammable

R11: Highly flammable.

R32-52/53: Contact with acids liberates very toxic gas. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Label elements:**Labelling according to Regulation (EC) No 1272/2008:**

The product is classified and labelled according to the CLP regulation.

Hazard pictograms:

GHS02 GHS05 GHS07

Signal word: Danger**Hazard-determining components of labelling:**

guanidinium thiocyanate
propan-2-ol
polyethylene glycol octylphenol ether
ethanol

Hazard statements:

H225 Highly flammable liquid and vapour.
H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
H314 Causes severe skin burns and eye damage.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405 Store locked up.

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P501 Dispose of contents/container in accordance with local/regional/national/international regulations. (Contd. of page 2)

Additional information:

EUH032 Contact with acids liberates very toxic gas.

Other hazards:**Results of PBT and vPvB assessment:****PBT:** Not applicable.**vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures**Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

CAS: 67-63-0	propan-2-ol	50-100%
EINECS: 200-661-7	Xi R36; F R11 R67	
	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	
CAS: 9002-93-1	polyethylene glycol octylphenol ether	25-50%
	Xn R22; Xi R41	
	Eye Dam. 1, H318; Acute Tox. 4, H302	
CAS: 593-84-0	guanidinium thiocyanate	10-25%
EINECS: 209-812-1	C R34; Xn R20/21/22 R32-52/53	
	Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Aquatic Chronic 3, H412	
CAS: 64-17-5	ethanol	50-100%
EINECS: 200-578-6	F R11	
	Flam. Liq. 2, H225	

SVHC:

9002-93-1 polyethylene glycol octylphenol ether

Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

Description of first aid measures:**General information:**

Take affected persons out into the fresh air.

Do not leave affected persons unattended.

After inhalation: Supply fresh air; consult doctor in case of complaints.**After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:**

Rinse opened eye for several minutes under running water.

Call a doctor immediately.

After swallowing: Call a doctor immediately.**Information for doctor:****Most important symptoms and effects, both acute and delayed:**

No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

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5 Firefighting measures

Extinguishing media:**Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:** Water with full jet**Special hazards arising from the substance or mixture:** Can form explosive gas-air mixtures.**Advice for firefighters:****Protective equipment:** Do not inhale explosion gases or combustion gases.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation

Keep away from ignition sources.

Wear protective clothing.

Environmental precautions: Do not allow product to reach sewage system or any water course.**Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

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

Reference to other sections:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Handling:**Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

Store in cool, dry place in tightly closed receptacles.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Fumes can combine with air to form an explosive mixture.

Flammable gas-air mixtures may form in empty receptacles.

Conditions for safe storage, including any incompatibilities:**Storage:****Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.**Information about storage in one common storage facility:**

Do not store together with acids.

Store away from flammable substances.

Further information about storage conditions:

Keep container tightly sealed.

Store receptacle in a well ventilated area.

Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

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Control parameters:**Ingredients with limit values that require monitoring at the workplace:****67-63-0 propan-2-ol**WEL Short-term value: 1250 mg/m³, 500 ppmLong-term value: 999 mg/m³, 400 ppm**64-17-5 ethanol**WEL Long-term value: 1920 mg/m³, 1000 ppm**Exposure controls:****Personal protective equipment:****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Immediately remove all soiled and contaminated clothing

Do not inhale gases / fumes / aerosols.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Respiratory protection: Use suitable respiratory protective device in case of insufficient ventilation.**Protection of hands:** Protective gloves**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. 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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Tightly sealed goggles

9 Physical and chemical properties

Information on basic physical and chemical properties:**General Information:****Appearance:**

Form:	Fluid
Colour:	Clear
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.

Change in condition:

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

Flash point:	< 21 °C
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	425 °C
Decomposition temperature:	Not determined.
Self-igniting:	Product is not selfigniting.
Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

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Explosion limits:

Lower: 2.0 Vol %
Upper: 15.0 Vol %

Vapour pressure at 20 °C: 59 hPa

Density: Not determined.

Relative density: Not determined.

Vapour density: Not determined.

Evaporation rate: Not determined.

Solubility in / Miscibility with water:

Soluble.

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

Other information: No further relevant information available.

10 Stability and reactivity

Reactivity:**Chemical stability:****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

Possibility of hazardous reactions: No dangerous reactions known.

Conditions to avoid: No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects:**Acute toxicity:****LD/LC50 values relevant for classification:****9002-93-1 polyethylene glycol octylphenol ether**

Oral LD50 1800 mg/kg (rat)

Dermal LD50 8000 mg/kg (rabbit)

593-84-0 guanidinium thiocyanate

Oral LD50 593 mg/kg (rat)

Primary irritant effect:

on the skin: Caustic effect on skin and mucous membranes.

on the eye: Strong caustic effect.

Sensitization: No sensitizing effects known.

12 Ecological information

Toxicity:

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Behaviour in environmental systems:

Bioaccumulative potential: No further relevant information available.

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Mobility in soil: No further relevant information available.**Additional ecological information:****General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Results of PBT and vPvB assessment:**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects:** No further relevant information available.

13 Disposal considerations

Waste treatment methods:**Recommendation:**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:**Recommendation:** Disposal must be made according to official regulations.

14 Transport information

UN-Number:**ADR, IMDG, IATA**

UN2924

UN proper shipping name:**ADR**2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S.
(ISOPROPANOL (ISOPROPYL ALCOHOL), guanidinium
thiocyanate)**IMDG, IATA**FLAMMABLE LIQUID, CORROSIVE, N.O.S.
(ISOPROPANOL (ISOPROPYL ALCOHOL), guanidinium
thiocyanate)**Transport hazard class(es):****ADR, IMDG, IATA****Class:**

3 Flammable liquids.

Label:

3+8

Packing group:**ADR, IMDG, IATA**

II

Environmental hazards:**Marine pollutant:**

No

Special precautions for user:

Warning: Flammable liquids.

EMS Number:

F-E,S-C

**Transport in bulk according to Annex II of
MARPOL73/78 and the IBC Code**

Not applicable.

Transport/Additional information:**ADR****Tunnel restriction code:**

D/E

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UN "Model Regulation":

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 UN2924, FLAMMABLE LIQUID, CORROSIVE, N.O.S.
 (ISOPROPANOL (ISOPROPYL ALCOHOL), guanidinium
 thiocyanate), 3 (8), II

15 Regulatory information

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

No further relevant information available.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.
.....	
R11	Highly flammable.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R22	Harmful if swallowed.
R32	Contact with acids liberates very toxic gas.
R34	Causes burns.
R36	Irritating to eyes.
R41	Risk of serious damage to eyes.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67	Vapours may cause drowsiness and dizziness.

Department issuing MSDS:

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 42113 Wuppertal
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Contact: Dr. Axel Deeg

Abbreviations and acronyms:

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 Harmonized 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
 Flam. Liq. 2: Flammable liquids, Hazard Category 2
 Acute Tox. 4: Acute toxicity, Hazard Category 4
 Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
 Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

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Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

Elution Buffer

15 / May / 2014

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English

Per OSHA 29CFR1910.1200, Commonwealth of Australia [NOHSC:1005, 1008(1999)] and the latest amendments to the European Union Directives 67/548/EC, 1999/45/EC and 1272/2008/EC, the following products do not require a Material Safety Data Sheet (MSDS). Skin-sensitizing, carcinogenic, and reprotoxic substances each comprise less than 0.1% of these products. Furthermore, less than 1% w/w of these products consists of materials that are classed as hazardous to human health or to the environment, or for which a Community limit value has been established. These products also contain no components from the Candidate List of Substances of Very High Concern for Authorisation (SVHC) in concentrations of 0.1% or more. Therefore Analytik Jena AG does not provide a MSDS for any of the following products. However, when working with these or any chemical reagents, we always recommend the use of gloves, lab coats, and eye protection. Analytik Jena AG assumes no liability for damage resulting from handling or contact with these products.

German

Nach OSHA 29CFR1910.1200, Commonwealth of Australia [NOHSC:1005, 1008(1999)] und den neuesten Änderungen der Europäischen Richtlinien 67/548/EG, 1999/45/EG und 1272/2008/EG benötigen die folgenden Produkte kein Sicherheitsdatenblatt (MSDS). Sie enthalten weniger als 0,1 % eines hautallergenen Stoffes, weniger als 0,1 % eines karzinogenen Stoffes, weniger als 0,1 % eines reproduktionstoxischen Stoffes, des Weiteren weniger als 1 Gewichts-% eines als gesundheitsschädlich oder umweltgefährlich eingestuft oder mit einem gemeinschaftlichen Grenzwert versehenen Stoffes und enthalten keine Komponenten von der Liste „Candidate list of Substances of Very High Concern for authorisation“ (SVHC) in einer Konzentration größer/gleich 0,1 %. Deshalb stellt Analytik Jena AG kein MSDS für die folgenden Produkte zur Verfügung. Wir empfehlen jedoch beim Umgang mit unseren Produkten oder mit Chemikalien das Tragen von Sicherheitsbrillen, Kitteln und Schutzhandschuhen. Analytik Jena AG übernimmt keine Haftung resultierend aus dem Umgang oder Kontakt mit unseren Produkten.

French

En accord avec la directive OSHA 29CFR1910.1200 du Commonwealth d'Australie [NOHSC:1005, 1008(1999)] et les dernières modifications des directives de la Communauté Européenne 67/548/CE, 1999/45/CE et 1272/2008/CE, les produits suivants ne nécessitent pas de fiche de données de sécurité (FDS). Ils contiennent moins de 0,1 % d'une substance provoquant des allergies cutanées, moins de 0,1 % d'une substance cancérigène, moins de 0,1 % d'une substance toxique pour la reproduction, en outre moins de 1 % en poids d'une substance classée comme dangereuse pour la santé ou pour l'environnement ou ayant une valeur limite commune et ils ne contiennent aucun composé de la liste « Candidate list of Substances of Very High Concern for authorisation » (SVHC) dans une concentration supérieure ou égale à 0,1 %. Par conséquent, Analytik Jena AG ne fournit pas de FDS pour les produits suivants. Toutefois, lors de la manipulation de ces produits ou d'autres produits chimiques, le port d'une blouse, de gants de protection et de lunettes de sécurité est obligatoire. Analytik Jena AG décline toute responsabilité en cas de dommages découlant de la manipulation ou du contact avec ces produits.

Italian

Conformemente alle norme sulla Comunicazione dei Rischi della OSHA 29CFR1910.1200, Commonwealth of Australia [NOHSC: 1005, 1008 (1999)] e ai successivi emendamenti alle Direttive Europee 67/548/CE, 1999/45/CE e 1272/2008/CE, i seguenti prodotti non richiedono la scheda di sicurezza (MSDS) in quanto contengono una quantità inferiore allo 0,1% di una sostanza dermoallergenica, una quantità inferiore allo 0,1% di una sostanza cancerogena, una quantità inferiore allo 0,1% di una sostanza tossica per la riproduzione. Inoltre, contengono una quantità inferiore all'1% in peso di una sostanza classificata come nociva per la salute o pericolosa per l'ambiente o di una sostanza soggetta ad un valore limite comunitario e non contengono alcuno dei componenti dell'elenco "Candidate list of Substances of Very High Concern for authorisation" (SVHC, ossia Elenco di sostanze estremamente problematiche candidate per l'autorizzazione) in una concentrazione pari o superiore allo 0,1%. Per questo motivo, Analytik Jena AG non fornisce alcuna scheda di dati sicurezza per i seguenti prodotti. Ciononostante, quando si lavora con questi o qualsiasi altro prodotto chimico è sempre consigliabile utilizzare guanti protettivi, camici adeguati e occhiali protettivi. Analytik Jena AG non si assume alcuna responsabilità per danni a cose e/o persone derivanti dall'uso e dal contatto con questi prodotti.

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Danish

I følge Commonwealth of Australia OSHA 29CFR1910.1200 [NOHSC:1005,1008 (999)] og det seneste tillæg til EU-direktiv 67/548/EF, 1999/45/EF og 1272/2008/EF kræver følgende produkter ikke sikkerhedsdatablad. De indeholder mindre end 0,1 % af et hudallergent stof, mindre end 0,1 % af et karcinogent stof, mindre end 0,1 % af et reproduktionstoksisk stof samt mindre end 1 % m/m af et stof klassificeret som sundhedsskadeligt eller miljøfarligt eller forsynet med en EU-grænseværdi og indeholder ingen komponenter fra listen "Candidate list of substances of very high concern for authorisation" (SVHC) i en koncentration på 0,1 % eller højere. Derfor leverer Analytik Jena AG intet sikkerhedsdatablad for nedenstående produkter. Vi anbefaler imidlertid altid brug af beskyttelsehandsker, kittel og øjenværn ved omgang med disse og andre kemikalier. Analytik Jena AG påtager sig intet ansvar for skader, der opstår ved brug af disse produkter.

Dutch

Volgens de richtlijnen van OSHA29CFR1920.1200, Commonwealth of Australia, [NOHSC:1005, 1008(1999)] en de laatste wijzigingen van de Europese Richtlijnen 67/548/EG, 1999/45/EG en 1272/2008/EG, is voor de volgende producten geen veiligheidsgegevensblad (MSDS) nodig. Ze bevatten minder dan 0,1% van een huidallergene stof, minder dan 0,1% van een carcinogene stof, minder dan 0,1% van een reproductietoxische stof, en verder minder dan 1 gewichts-% van een als schadelijk voor de gezondheid of het milieu geclassificeerde of van een gemeenschappelijke grenswaarde voorziene stof en bevatten geen componenten uit de lijst "Candidate list of Substances of Very High Concern for authorisation" (SVHC) in een concentratie groter dan/gelijk aan 0,1%. Daarom stelt Analytik Jena AG voor de volgende producten geen veiligheidsgegevensblad ter beschikking. Desalniettemin raden we voor het werken met deze chemische reagentia altijd het dragen van handschoenen, labjassen en veiligheidsbrillen aan. Analytik Jena AG stelt zich niet aansprakelijk voor schade die voortkomt uit het gebruik van of het contact met deze producten.

Portuguese

Segundo a OSHA 29CFR1910.1200, a Comunidade da Austrália [NOHSC:1005, 1008(1999)] e as mais recentes alterações das diretivas da União Europeia 67/548/CE, 1999/45/CE e 1272/2008/CE, os seguintes produtos não requerem uma ficha de dados de segurança (FDS). Eles contêm menos de 0,1% de uma substância sensibilizante para a pele, menos de 0,1% de uma substância carcinogénea, menos de 0,1% de uma substância tóxica para a reprodução, além disso, contêm menos de 1% de peso de uma substância classificada como nociva e perigosa para o ambiente ou uma substância sujeita a um limite comunitário, e não contêm componentes da lista "Candidate list of Substances of Very High Concern for authorisation" (SVHC) (Lista de Substâncias Candidatas a Autorização que Suscitam Elevada Preocupação) numa concentração superior/igual a 0,1%. Por conseguinte, a Analytik Jena AG não disponibiliza nenhuma FDS para os seguintes produtos. Todavia, durante o manuseamento dos nossos produtos, recomendamos o uso de óculos e luvas de proteção, e batas de laboratório. A Analytik Jena AG não assume qualquer responsabilidade que resulte do manuseamento ou do contacto com os nossos produtos.

Spanish

Por OSHA 29CFR1910.1200, la Mancomunidad de Australia [NOHSC:1005, 1008(1999)] y por las últimas enmiendas a las directrices de la Unión Europa 67/548/CE, 1999/45/CE y 1272/2008/CE, los siguientes productos no requieren de una Hoja de Seguridad (MSDS). Contienen menos de un 0,1% de una sustancia dermoalérgica, menos de un 0,1% de una sustancia cancerígena y menos de un 0,1% de una sustancia con toxicidad reproductiva, así como menos de un 1% en peso de una sustancia clasificada como nociva para la salud o peligrosa para el medio ambiente o para la que existan límites de exposición comunitarios, y no contienen ningún componente incluido en la «lista de sustancias candidatas altamente preocupantes sujetas a autorización» (SVHC) en concentración igual ni superior al 0,1%. Por consiguiente, Analytik Jena AG no proporciona una MSDS para ninguno de los siguientes productos. Sin embargo, cuando se trabaje con estos o cualquier reactivo químico, siempre recomendamos el uso de guantes, batas para laboratorio y protección de ojos. Analytik Jena AG no asume ninguna responsabilidad por daño causado por el uso o contacto con estos productos.

Product information

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.05.2014

Revision: 14.05.2014

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

Product identifier**Trade name:** Lysis Solution CBV**Relevant identified uses of the substance or mixture and uses advised against:**

No further relevant information available.

Application of the substance / the preparation: Buffer**Uses advised against:** No further information available.**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

AJ Innuscreen GmbH
Biotechnologie Campus Berlin-Buch
Robert-Rössle-Straße 10
13125 Berlin
Germany
Tel.: +49 (0) 30 9489-3380
Fax: +49 (0) 30 9489-3381
E-Mail: info@aj-innuscreen.de
Internet: www.aj-innuscreen.de

Further information obtainable from: AJ Innuscreen GmbH**Emergency telephone number:**

Poison Information Center / Vergiftungs-Informationen-Zentrale
Mathildenstraße 1
79106 Freiburg
Germany
Tel.: +49 (0) 761 19 240
Fax: +49 (0) 761 270 44 570
E-Mail: giftinfo@uniklinik-freiburg.de
Internet: www.giftberatung.de

2 Hazards identification

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

The product is not classified according to the CLP regulation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC:

Xi; Irritant

R36: Irritating to eyes.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Label elements:**Labelling according to Regulation (EC) No 1272/2008:** Void**Hazard pictograms:** Void**Signal word:** Void**Hazard statements:** Void**Other hazards:****Results of PBT and vPvB assessment:****PBT:** Not applicable.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.05.2014

Revision: 14.05.2014

Trade name: Lysis Solution CBV

(Contd. of page 1)

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures**Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

CAS: 151-21-3	sodium dodecyl sulphate	5-<10%
EINECS: 205-788-1	☒ Xn R22; ☒ Xi R38-41	
	⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Aquatic Chronic 3, H412	

Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

Description of first aid measures:**General information:**

Take affected persons out into the fresh air.

Do not leave affected persons unattended.

After inhalation: Supply fresh air; consult doctor in case of complaints.**After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:**

Rinse opened eye for several minutes under running water.

Call a doctor immediately.

After swallowing: Call a doctor immediately.**Information for doctor:****Most important symptoms and effects, both acute and delayed:**

No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting measures

Extinguishing media:**Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:** Water with full jet**Special hazards arising from the substance or mixture:** No further relevant information available.**Advice for firefighters:****Protective equipment:** Do not inhale explosion gases or combustion gases.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear protective clothing.**Environmental precautions:** Do not allow product to reach sewage system or any water course.**Methods and material for containment and cleaning up:**

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

Reference to other sections:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.05.2014

Revision: 14.05.2014

Trade name: Lysis Solution CBV

(Contd. of page 2)

7 Handling and storage

Handling:**Precautions for safe handling:** Store in cool, dry place in tightly closed receptacles.**Information about fire - and explosion protection:** No special measures required.**Conditions for safe storage, including any incompatibilities:****Storage:****Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**Specific end use(s):** No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.**Control parameters:****Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Exposure controls:**Personal protective equipment:****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Respiratory protection: Use suitable respiratory protective device in case of insufficient ventilation.**Protection of hands:** Protective gloves**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. 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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Tightly sealed goggles

9 Physical and chemical properties

Information on basic physical and chemical properties:**General Information:****Appearance:****Form:** Fluid**Colour:** Clear**Odour:** Characteristic**Odour threshold:** Not determined.**pH-value at 20 °C:** 8.0**Change in condition:****Melting point/Melting range:** 0 °C

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.05.2014

Revision: 14.05.2014

Trade name: Lysis Solution CBV

(Contd. of page 3)

Boiling point/Boiling range:	100 °C
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	
Decomposition temperature:	Not determined.
Self-igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapour pressure at 20 °C:	23 hPa
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.
Other information:	No further relevant information available.

10 Stability and reactivity

Reactivity:
Chemical stability:
Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
Possibility of hazardous reactions: No dangerous reactions known.
Conditions to avoid: No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects:
Acute toxicity:
Primary irritant effect:
on the skin: Irritant to skin and mucous membranes.
on the eye: Irritating effect.
Sensitization: No sensitizing effects known.

12 Ecological information

Toxicity:
Aquatic toxicity: No further relevant information available.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.05.2014

Revision: 14.05.2014

Trade name: Lysis Solution CBV

(Contd. of page 4)

Persistence and degradability: No further relevant information available.**Behaviour in environmental systems:****Bioaccumulative potential:** No further relevant information available.**Mobility in soil:** No further relevant information available.**Additional ecological information:****General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Results of PBT and vPvB assessment:**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects:** No further relevant information available.

13 Disposal considerations

Waste treatment methods:**Recommendation:**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:**Recommendation:** Disposal must be made according to official regulations.

14 Transport information

UN-Number:

ADR, ADN, IMDG, IATA Void

UN proper shipping name:

ADR, ADN, IMDG, IATA Void

Transport hazard class(es):

ADR, ADN, IMDG, IATA

Class: Void**Packing group:**

ADR, IMDG, IATA Void

Environmental hazards:**Marine pollutant:** No**Special precautions for user:** Not applicable.**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.**UN "Model Regulation":** -

15 Regulatory information

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

No further relevant information available.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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:

H302 Harmful if swallowed.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.05.2014

Revision: 14.05.2014

Trade name: Lysis Solution CBV

(Contd. of page 5)

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.
.....
R22 Harmful if swallowed.
R38 Irritating to skin.
R41 Risk of serious damage to eyes.

Department issuing MSDS:

ADEEGO GmbH
Wildsteig 4A
42113 Wuppertal
Tel. +49 (0) 202 2575700
Fax. +49 (0) 202 2575701
Email: mail@adeego.de
www.adeego.de

Contact: Dr. Axel Deeg**Abbreviations and acronyms:**

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 Harmonized 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)
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.08.2014

Revision: 12.08.2014

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

Product identifier**Trade name:** Lysis Solution OPT**Relevant identified uses of the substance or mixture and uses advised against:**

No further relevant information available.

Application of the substance / the preparation: Buffer**Uses advised against:** No further information available.**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

AJ Innuscreen GmbH
Biotechnologie Campus Berlin-Buch
Robert-Rössle-Straße 10
13125 Berlin
Germany
Tel.: +49 (0) 30 9489-3380
Fax: +49 (0) 30 9489-3381
E-Mail: info@aj-innuscreen.de
Internet: www.aj-innuscreen.de

Further information obtainable from: AJ Innuscreen GmbH**Emergency telephone number:**

Poison Information Center / Vergiftungs-Informationen-Zentrale
Mathildenstraße 1
79106 Freiburg
Germany
Tel.: +49 (0) 761 19 240
Fax: +49 (0) 761 270 44 570
E-Mail: giftinfo@uniklinik-freiburg.de
Internet: www.giftberatung.de

2 Hazards identification

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

The product is not classified according to the CLP regulation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC: Not applicable.**Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Label elements:**Labelling according to Regulation (EC) No 1272/2008:** Void**Hazard pictograms:** Void**Signal word:** Void**Hazard statements:** Void**Other hazards:****Results of PBT and vPvB assessment:****PBT:** Not applicable.**vPvB:** Not applicable.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.08.2014

Revision: 12.08.2014

Trade name: Lysis Solution OPT

(Contd. of page 1)

3 Composition/information on ingredients

Chemical characterization: Mixtures**Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

CAS: 151-21-3	sodium dodecyl sulphate	1-≤2.5%
EINECS: 205-788-1	☒ Xn R22; ☒ Xi R38-41 ☒ Eye Dam. 1, H318; ☒ Acute Tox. 4, H302; Skin Irrit. 2, H315; Aquatic Chronic 3, H412	

Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

Description of first aid measures:**General information:**

Take affected persons out into the fresh air.

Do not leave affected persons unattended.

After inhalation: Supply fresh air; consult doctor in case of complaints.**After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:**

Rinse opened eye for several minutes under running water.

Call a doctor immediately.

After swallowing: Call a doctor immediately.**Information for doctor:****Most important symptoms and effects, both acute and delayed:**

No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting measures

Extinguishing media:**Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:** Water with full jet**Special hazards arising from the substance or mixture:** No further relevant information available.**Advice for firefighters:****Protective equipment:** Do not inhale explosion gases or combustion gases.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear protective clothing.**Environmental precautions:** Do not allow product to reach sewage system or any water course.**Methods and material for containment and cleaning up:**

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

Reference to other sections:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.08.2014

Revision: 12.08.2014

Trade name: Lysis Solution OPT

(Contd. of page 2)

7 Handling and storage

Handling:**Precautions for safe handling:** Store in cool, dry place in tightly closed receptacles.**Information about fire - and explosion protection:** No special measures required.**Conditions for safe storage, including any incompatibilities:****Storage:****Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**Specific end use(s):** No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.**Control parameters:****Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Exposure controls:**Personal protective equipment:****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Respiratory protection: Use suitable respiratory protective device in case of insufficient ventilation.**Protection of hands:** Protective gloves**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. 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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Tightly sealed goggles

9 Physical and chemical properties

Information on basic physical and chemical properties:**General Information:****Appearance:****Form:** Fluid**Colour:** Clear**Odour:** Characteristic**Odour threshold:** Not determined.**pH-value at 20 °C:** 8.0**Change in condition:****Melting point/Melting range:** 0 °C

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.08.2014

Revision: 12.08.2014

Trade name: Lysis Solution OPT

(Contd. of page 3)

Boiling point/Boiling range:	100 °C
Flash point:	Not applicable.
Flammability (solid, gaseous):	Not applicable.
Ignition temperature:	
Decomposition temperature:	Not determined.
Self-igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapour pressure at 20 °C:	23 hPa
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.
Other information:	No further relevant information available.

10 Stability and reactivity

Reactivity:
Chemical stability:
Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
Possibility of hazardous reactions: No dangerous reactions known.
Conditions to avoid: No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects:
Acute toxicity:
Primary irritant effect:
on the skin: Irritant to skin and mucous membranes.
on the eye: Irritating effect.
Sensitization: No sensitizing effects known.

12 Ecological information

Toxicity:
Aquatic toxicity: No further relevant information available.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.08.2014

Revision: 12.08.2014

Trade name: Lysis Solution OPT

(Contd. of page 4)

Persistence and degradability: No further relevant information available.**Behaviour in environmental systems:****Bioaccumulative potential:** No further relevant information available.**Mobility in soil:** No further relevant information available.**Additional ecological information:****General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Results of PBT and vPvB assessment:**PBT:** Not applicable.**vPvB:** Not applicable.**Other adverse effects:** No further relevant information available.

13 Disposal considerations

Waste treatment methods:**Recommendation:**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:**Recommendation:** Disposal must be made according to official regulations.

14 Transport information

UN-Number:

ADR, ADN, IMDG, IATA Void

UN proper shipping name:

ADR, ADN, IMDG, IATA Void

Transport hazard class(es):

ADR, ADN, IMDG, IATA

Class: Void**Packing group:**

ADR, IMDG, IATA Void

Environmental hazards:**Marine pollutant:** No**Special precautions for user:** Not applicable.**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.**UN "Model Regulation":** -

15 Regulatory information

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

No further relevant information available.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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:

H302 Harmful if swallowed.

(Contd. on page 6)

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

Printing date 12.08.2014

Revision: 12.08.2014

Trade name: Lysis Solution OPT

(Contd. of page 5)

H315 Causes skin irritation.

H318 Causes serious eye damage.

H412 Harmful to aquatic life with long lasting effects.

R22 Harmful if swallowed.

R38 Irritating to skin.

R41 Risk of serious damage to eyes.

Department issuing MSDS:

ADEEGO GmbH

Wildsteig 4A

42113 Wuppertal

Tel. +49 (0) 202 2575700

Fax. +49 (0) 202 2575701

Email: mail@adeego.de

www.adeego.de

Contact: Dr. Axel Deeg**Abbreviations and acronyms:**

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 Harmonized 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)

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

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

Printing date 09.05.2014

Revision: 09.05.2014

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

Product identifier**Trade name:** Lysis Solution SLS**Relevant identified uses of the substance or mixture and uses advised against:**

No further relevant information available.

Application of the substance / the preparation: Buffer**Uses advised against:** No further information available.**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

AJ Innuscreen GmbH
Biotechnologie Campus Berlin-Buch
Robert-Rössle-Straße 10
13125 Berlin
Germany
Tel.: +49 (0) 30 9489-3380
Fax: +49 (0) 30 9489-3381
E-Mail: info@aj-innuscreen.de
Internet: www.aj-innuscreen.de

Further information obtainable from: AJ Innuscreen GmbH**Emergency telephone number:**

Poison Information Center / Vergiftungs-Informationen-Zentrale
Mathildenstraße 1
79106 Freiburg
Germany
Tel.: +49 (0) 761 19 240
Fax: +49 (0) 761 270 44 570
E-Mail: giftinfo@uniklinik-freiburg.de
Internet: www.giftberatung.de

2 Hazards identification

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

GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC: Not applicable.**Information concerning particular hazards for human and environment:**

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Label elements:**Labelling according to Regulation (EC) No 1272/2008:**

The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Revision: 09.05.2014

Trade name: Lysis Solution SLS

(Contd. of page 1)

Hazard pictograms:

GHS07

Signal word: Warning**Hazard-determining components of labelling:**

ammonium chloride
 cetrimonium bromide

Hazard statements:

H319 Causes serious eye irritation.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P103 Read label before use.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P264 Wash thoroughly after handling.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Other hazards:**Results of PBT and vPvB assessment:****PBT:** Not applicable.**vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures**Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

CAS: 12125-02-9	ammonium chloride	10-<20%
EINECS: 235-186-4	Xn R22; Xi R36 Acute Tox. 4, H302; Eye Irrit. 2, H319	
CAS: 57-09-0	cetrimonium bromide	1-≤2.5%
EINECS: 200-311-3	Xn R22; Xi R36/38; N R50 Eye Dam. 1, H318; Aquatic Acute 1, H400; Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335	

Additional information: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

Description of first aid measures:**General information:**

Take affected persons out into the fresh air.

Do not leave affected persons unattended.

After inhalation: Supply fresh air; consult doctor in case of complaints.**After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:**

Rinse opened eye for several minutes under running water.

Call a doctor immediately.

After swallowing: Call a doctor immediately.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Revision: 09.05.2014

Trade name: Lysis Solution SLS

(Contd. of page 2)

Information for doctor:**Most important symptoms and effects, both acute and delayed:**

No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting measures

Extinguishing media:**Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:** Water with full jet**Special hazards arising from the substance or mixture:** No further relevant information available.**Advice for firefighters:****Protective equipment:** Do not inhale explosion gases or combustion gases.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear protective clothing.**Environmental precautions:** Do not allow product to reach sewage system or any water course.**Methods and material for containment and cleaning up:**

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

Reference to other sections:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Handling:**Precautions for safe handling:** Store in cool, dry place in tightly closed receptacles.**Information about fire - and explosion protection:** No special measures required.**Conditions for safe storage, including any incompatibilities:****Storage:****Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**Specific end use(s):** No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.**Control parameters:****Ingredients with limit values that require monitoring at the workplace:****12125-02-9 ammonium chloride**WEL Short-term value: 20 mg/m³Long-term value: 10 mg/m³**Exposure controls:****Personal protective equipment:****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

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Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Respiratory protection: Use suitable respiratory protective device in case of insufficient ventilation.**Protection of hands:** Protective gloves**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. 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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Tightly sealed goggles

9 Physical and chemical properties

Information on basic physical and chemical properties:**General Information:****Appearance:**

Form:	Fluid
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not determined.

Change in condition:

Melting point/Melting range:	0 °C
Boiling point/Boiling range:	100 °C

Flash point: Not applicable.**Flammability (solid, gaseous):** Not applicable.**Ignition temperature:****Decomposition temperature:** Not determined.**Self-igniting:** Product is not selfigniting.**Danger of explosion:** Product does not present an explosion hazard.**Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure at 20 °C: 23 hPa**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.

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Trade name: Lysis Solution SLS

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Kinematic: Not determined.
Other information: No further relevant information available.

10 Stability and reactivity

Reactivity:
Chemical stability:
Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
Possibility of hazardous reactions: No dangerous reactions known.
Conditions to avoid: No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects:
Acute toxicity:
LD/LC50 values relevant for classification:
12125-02-9 ammonium chloride
Oral LD50 1650 mg/kg (rat)
Primary irritant effect:
on the skin: Irritant to skin and mucous membranes.
on the eye: Strong irritant with the danger of severe eye injury.
Sensitization: No sensitizing effects known.

12 Ecological information

Toxicity:
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Behaviour in environmental systems:
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Additional ecological information:
General notes:
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Results of PBT and vPvB assessment:
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects: No further relevant information available.

13 Disposal considerations

Waste treatment methods:
Recommendation:
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

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Safety data sheet

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Trade name: Lysis Solution SLS

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14 Transport information

UN-Number:	
ADR, ADN, IMDG, IATA	Void
UN proper shipping name:	
ADR, ADN, IMDG, IATA	Void
Transport hazard class(es):	
ADR, ADN, IMDG, IATA	
Class:	Void
Packing group:	
ADR, IMDG, IATA	Void
Environmental hazards:	
Marine pollutant:	No
Special precautions for user:	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	-

15 Regulatory information

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

No further relevant information available.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
R22	Harmful if swallowed.
R36	Irritating to eyes.
R36/38	Irritating to eyes and skin.
R50	Very toxic to aquatic organisms.

Department issuing MSDS:

ADEEGO GmbH
 Wildsteig 4A
 42113 Wuppertal
 Tel. +49 (0) 202 2575700
 Fax. +49 (0) 202 2575701
 Email: mail@adeego.de
 www.adeego.de

Contact: Dr. Axel Deeg

Abbreviations and acronyms:

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

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Trade name: Lysis Solution SLS

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GHS: Globally Harmonized 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
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.05.2014

Revision: 14.05.2014

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

Product identifier**Trade name:** Precipitation Buffer P**Relevant identified uses of the substance or mixture and uses advised against:**

No further relevant information available.

Application of the substance / the preparation: Buffer**Uses advised against:** No further information available.**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

AJ Innuscreen GmbH
Biotechnologie Campus Berlin-Buch
Robert-Rössle-Straße 10
13125 Berlin
Germany
Tel.: +49 (0) 30 9489-3380
Fax: +49 (0) 30 9489-3381
E-Mail: info@aj-innuscreen.de
Internet: www.aj-innuscreen.de

Further information obtainable from: AJ Innuscreen GmbH**Emergency telephone number:**

Poison Information Center / Vergiftungs-Informationen-Zentrale
Mathildenstraße 1
79106 Freiburg
Germany
Tel.: +49 (0) 761 19 240
Fax: +49 (0) 761 270 44 570
E-Mail: giftinfo@uniklinik-freiburg.de
Internet: www.giftberatung.de

2 Hazards identification

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

GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC:

Xi; Irritant

R36/38: Irritating to eyes and skin.

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Label elements:**Labelling according to Regulation (EC) No 1272/2008:**

The product is classified and labelled according to the CLP regulation.

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Trade name: Precipitation Buffer P

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Hazard pictograms:

GHS07

Signal word: Warning**Hazard-determining components of labelling:**

acetic acid

Hazard statements:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P362 Take off contaminated clothing and wash before reuse.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P302+P352 IF ON SKIN: Wash with plenty of water.

Other hazards:**Results of PBT and vPvB assessment:****PBT:** Not applicable.**vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures**Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

CAS: 64-19-7 acetic acid 10-<25%

EINECS: 200-580-7  C R35

R10

 Flam. Liq. 3, H226;  Skin Corr. 1A, H314**Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

Description of first aid measures:**General information:**

Take affected persons out into the fresh air.

Do not leave affected persons unattended.

After inhalation: Supply fresh air; consult doctor in case of complaints.**After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:**

Rinse opened eye for several minutes under running water.

Call a doctor immediately.

After swallowing: Call a doctor immediately.

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Trade name: Precipitation Buffer P

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Information for doctor:**Most important symptoms and effects, both acute and delayed:**

No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting measures

Extinguishing media:**Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:** Water with full jet**Special hazards arising from the substance or mixture:**

Formation of toxic gases is possible during heating or in case of fire.

Advice for firefighters:**Protective equipment:** Do not inhale explosion gases or combustion gases.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear protective clothing.**Environmental precautions:** Do not allow product to reach sewage system or any water course.**Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

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

Reference to other sections:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Handling:**Precautions for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).

Store in cool, dry place in tightly closed receptacles.

Information about fire - and explosion protection: Keep ignition sources away - Do not smoke.**Conditions for safe storage, including any incompatibilities:****Storage:****Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.**Information about storage in one common storage facility:**

Do not store together with alkalis (caustic solutions).

Further information about storage conditions:

Keep container tightly sealed.

Store receptacle in a well ventilated area.

Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

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Trade name: Precipitation Buffer P

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Control parameters:**Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Exposure controls:**Personal protective equipment:****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Respiratory protection: Use suitable respiratory protective device in case of insufficient ventilation.

Protection of hands: Protective gloves

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

Eye protection: Tightly sealed goggles

9 Physical and chemical properties

Information on basic physical and chemical properties:**General Information:****Appearance:**

Form:	Fluid
Colour:	Clear
Odour:	Characteristic
Odour threshold:	Not determined.

pH-value at 20 °C: 5.2

Change in condition:

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C

Flash point: Not applicable.

Flammability (solid, gaseous): Not applicable.

Ignition temperature: 485 °C

Decomposition temperature: Not determined.

Self-igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure at 20 °C: 23 hPa

Density: Not determined.

Relative density: Not determined.

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Vapour density:	Not determined.
Evaporation rate:	Not determined.
Solubility in / Miscibility with water:	Soluble.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Other information:	No further relevant information available.

10 Stability and reactivity

Reactivity:
Chemical stability:
Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
Possibility of hazardous reactions: No dangerous reactions known.
Conditions to avoid: No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects:
Acute toxicity:
LD/LC50 values relevant for classification:
64-19-7 acetic acid
Oral LD50 3310 mg/kg (rat)
Dermal LD50 1060 mg/kg (rabbit)
Primary irritant effect:
on the skin: Irritant to skin and mucous membranes.
on the eye: Strong irritant with the danger of severe eye injury.
Sensitization: No sensitizing effects known.

12 Ecological information

Toxicity:
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Behaviour in environmental systems:
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Additional ecological information:
General notes:
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Results of PBT and vPvB assessment:
PBT: Not applicable.
vPvB: Not applicable.

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Trade name: Precipitation Buffer P

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Other adverse effects: No further relevant information available.

13 Disposal considerations

Waste treatment methods:**Recommendation:**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

14 Transport information

UN-Number:

ADR, IMDG, IATA

UN2790

UN proper shipping name:

ADR

2790 ACETIC ACID SOLUTION

IMDG, IATA

ACETIC ACID SOLUTION

Transport hazard class(es):

ADR, IMDG, IATA

**Class:**

8 Corrosive substances.

Label:

8

Packing group:

ADR, IMDG, IATA

III

Environmental hazards:**Marine pollutant:**

No

Special precautions for user:

Warning: Corrosive substances.

EMS Number:

F-A,S-B

Segregation groups:

Acids

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

UN "Model Regulation":

UN2790, ACETIC ACID SOLUTION, 8, III

15 Regulatory information

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

No further relevant information available.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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:

H226 Flammable liquid and vapour.

H314 Causes severe skin burns and eye damage.

R10 Flammable.

R35 Causes severe burns.

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

Printing date 14.05.2014

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Trade name: Precipitation Buffer P

(Contd. of page 6)

Department issuing MSDS:

ADEEGO GmbH
Wildsteig 4A
42113 Wuppertal
Tel. +49 (0) 202 2575700
Fax. +49 (0) 202 2575701
Email: mail@adeego.de
www.adeego.de

Contact: Dr. Axel Deeg**Abbreviations and acronyms:**

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 Harmonized 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
Flam. Liq. 3: Flammable liquids, Hazard Category 3
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Revision: 09.05.2014

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

Product identifier**Trade name:** Proteinase K**Relevant identified uses of the substance or mixture and uses advised against:**

No further relevant information available.

Application of the substance / the preparation: Enzyme**Uses advised against:** No further information available.**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

AJ Innuscreen GmbH
 Biotechnologie Campus Berlin-Buch
 Robert-Rössle-Straße 10
 13125 Berlin
 Germany
 Tel.: +49 (0) 30 9489-3380
 Fax: +49 (0) 30 9489-3381
 E-Mail: info@aj-innuscreen.de
 Internet: www.aj-innuscreen.de

Further information obtainable from: AJ Innuscreen GmbH**Emergency telephone number:**

Poison Information Center / Vergiftungs-Informationen-Zentrale
 Mathildenstraße 1
 79106 Freiburg
 Germany
 Tel.: +49 (0) 761 19 240
 Fax: +49 (0) 761 270 44 570
 E-Mail: giftinfo@uniklinik-freiburg.de
 Internet: www.giftberatung.de

2 Hazards identification

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

GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
 Eye Irrit. 2 H319 Causes serious eye irritation.
 Skin Sens. 1 H317 May cause an allergic skin reaction.
 STOT SE 3 H335 May cause respiratory irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC:

Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.



Xn; Sensitising

R42: May cause sensitisation by inhalation.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Revision: 09.05.2014

Trade name: Proteinase K

(Contd. of page 1)

Information concerning particular hazards for human and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

Label elements:**Labelling according to Regulation (EC) No 1272/2008:**

The product is classified and labelled according to the CLP regulation.

Hazard pictograms:

GHS07 GHS08

Signal word: Danger**Hazard-determining components of labelling:**

Proteinase, Tritirachium album serine

Hazard statements:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

Precautionary statements:

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P362 Take off contaminated clothing and wash before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards:**Results of PBT and vPvB assessment:**

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 39450-01-6 Proteinase, Tritirachium album serine

50-100%

EINECS: 254-457-8 Xi R36/37/38; Xn R42

Resp. Sens. 1, H334; Skin Irrit. 2, H315; Eye Irrit. 2, H319

Additional information: For the wording of the listed risk phrases refer to section 16.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Revision: 09.05.2014

Trade name: Proteinase K

(Contd. of page 2)

4 First aid measures

Description of first aid measures:**General information:**

Take affected persons out into the fresh air.

Do not leave affected persons unattended.

After inhalation: Supply fresh air; consult doctor in case of complaints.**After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:**

Rinse opened eye for several minutes under running water.

Call a doctor immediately.

After swallowing: Call a doctor immediately.**Information for doctor:****Most important symptoms and effects, both acute and delayed:**

No further relevant information available.

Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

5 Firefighting measures

Extinguishing media:**Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:** Water with full jet**Special hazards arising from the substance or mixture:** No further relevant information available.**Advice for firefighters:****Protective equipment:** Do not inhale explosion gases or combustion gases.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear protective clothing.**Environmental precautions:** Do not allow product to reach sewage system or any water course.**Methods and material for containment and cleaning up:** Pick up mechanically.**Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Handling:**Precautions for safe handling:** Store in cool, dry place in tightly closed receptacles.**Information about fire - and explosion protection:** No special measures required.**Conditions for safe storage, including any incompatibilities:****Storage:****Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**Specific end use(s):** No further relevant information available.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 09.05.2014

Revision: 09.05.2014

Trade name: Proteinase K

(Contd. of page 3)

8 Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

Control parameters:

Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Exposure controls:

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Respiratory protection: Use suitable respiratory protective device in case of insufficient ventilation.

Protection of hands: Protective gloves

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

Eye protection: Tightly sealed goggles

9 Physical and chemical properties

Information on basic physical and chemical properties:

General Information:

Appearance:

Form: Solid

Colour: White

Odour: Nearly odourless

Odour threshold: Not determined.

pH-value: 6.5 (as aqueous solution)

Change in condition:

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

Flash point: Not applicable.

Flammability (solid, gaseous): Not applicable.

Ignition temperature:

Decomposition temperature: Not determined.

Self-igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower: Not determined.

Upper: Not determined.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 09.05.2014

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Trade name: Proteinase K

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Vapour pressure:	Not applicable.
Density:	Not determined.
Relative density:	Not determined.
Vapour density:	Not determined.
Evaporation rate:	Not determined.
Solubility in / Miscibility with water:	Soluble.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Other information:	No further relevant information available.

10 Stability and reactivity

Reactivity:
Chemical stability:
Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
Possibility of hazardous reactions: No dangerous reactions known.
Conditions to avoid: No further relevant information available.
Incompatible materials: No further relevant information available.
Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

Information on toxicological effects:
Acute toxicity:
Primary irritant effect:
on the skin: Irritant to skin and mucous membranes.
on the eye: Strong irritant with the danger of severe eye injury.
Sensitization:
Sensitization possible through skin contact.
Sensitization possible through inhalation.

12 Ecological information

Toxicity:
Aquatic toxicity: No further relevant information available.
Persistence and degradability: No further relevant information available.
Behaviour in environmental systems:
Bioaccumulative potential: No further relevant information available.
Mobility in soil: No further relevant information available.
Additional ecological information:
General notes:
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Results of PBT and vPvB assessment:
PBT: Not applicable.
vPvB: Not applicable.

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Other adverse effects: No further relevant information available.

13 Disposal considerations

Waste treatment methods:**Recommendation:**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:**Recommendation:** Disposal must be made according to official regulations.

14 Transport information

UN-Number:

ADR, ADN, IMDG, IATA Void

UN proper shipping name:

ADR, ADN, IMDG, IATA Void

Transport hazard class(es):

ADR, ADN, IMDG, IATA

Class: Void**Packing group:**

ADR, IMDG, IATA Void

Environmental hazards:**Marine pollutant:** No**Special precautions for user:** Not applicable.**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.**UN "Model Regulation":** -

15 Regulatory information

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

No further relevant information available.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

R36/37/38 Irritating to eyes, respiratory system and skin.

R42 May cause sensitisation by inhalation.

Department issuing MSDS:

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Contact: Dr. Axel Deeg**Abbreviations and acronyms:**

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 Harmonized 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)

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
