

MATERIAL SAFETY DATA SHEET

1) Identification

Trade names: SILAC RPMI L-Lysine 8 L-Arginine 10 Kit, 13C15N labeled

Article No.: 284986444

Supplier : Silantes GmbH
Gollierstr. 70c
D-80339 Munich
Tel.: +49(0)89 500 941 0
Fax: +49(0)89 500 941 29
E-mail: info@silantes.com

Emergency phone number: +49(0)89 500 941 0
Language: English
Monday to Friday
From 10:00 to 15:00 (CET)

Recommended use: research only

Restrictions on use: not for human use

The product does not meet the specifications of any of the hazard classes outlined by the Globally Harmonized System of Classification and Labelling of Chemicals.*

Therefore it is not necessary for this MSDS to be in compliance with the GHS.

*Canada: Schedule 2 of the Hazardous Product Act (R.S.C., 1985, c. H-3), Current to November 20, 2018 last amended on May 23, 2018

*United States of America: OSHA, 29 CFR 1910.1200(g) and Appendix A and B

2) Hazard identification

Hazard classification:
Not hazardous products within the meaning of Guideline 67/548/EEC

Label elements:
The product is exempt from the specific labeling requirements on the basis of the calculation procedures of the "General Classification Guidelines for Preparations in the EU" in the latest valid version.

Signal word: not required

MATERIAL SAFETY DATA SHEET

Other hazards:

not applicable

Additional information: Chemicals are by their nature hazardous substances. They are therefore only to be handled by appropriately trained personnel exercising the necessary diligence.

3) Composition/Information on ingredients

The product does not contain any hazardous material or substance.

Ingredients:

- 2x 500mL SILAC RPMI (*find MSDS attached*)
- 2x 50mL SILAC Fetal Bovine Serum (FBS), dialyzed and sterile, unlabeled, EU approved (*find MSDS attached*)
- 1x SILAC Amino Acid L-Lysine 0, unlabeled (*find MSDS attached*)
- 1x SILAC Amino Acid L-Lysine 8 HCL for 500ml SILAC RPMI Media, 13C15N labeled (*find MSDS attached*)
- 1x SILAC Amino Acid L-Arginine 0, unlabeled (*find MSDS attached*)
- 1x SILAC Amino Acid L-Arginine 10 HCL for 500ml SILAC RPMI Media, 13C15N labeled (*find MSDS attached*)
- 2x SILAC Stable Glutamine for SILAC Media, unlabeled (*find MSDS attached*)

4) First-aid measures

General instructions:

Remove clothing contaminated with product immediately.

Inhalation:

Inhale fresh air

Skin contact:

Wash off immediately with water

Contact with eyes:

Lift eyelids and rinse eyes for 10 minutes under running water. Seek medical attention if discomfort continues.

Ingestion:

Rinse out mouth and have affected person drink a glass of water. Do not induce vomiting. If discomfort continues, consult a medical doctor.

Symptoms:

One may feel slight discomfort after ingesting product.

No other symptoms known.

5) Fire-fighting measures

Product is neither self-igniting nor flammable.

Extinguish with:

Consider fire surroundings and choose fire-fighting measures accordingly.

water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Do not extinguish with:

water jet

Equipment for fire-fighting:

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

Hazards arising from fire:

none

6) Accidental release measures

Personal measures/protective equipment:

Wipe up with absorbent material (e.g. cloth, fleece).

Environmental measures:

Do not allow to enter the canalization/surface water/ground water systems

Cleansing/absorption material:

Absorbent material (e.g. cloth, fleece, paper towel).

Cleansing/absorption procedures:

Absorb mechanically, clean spill site after absorption (e.g. Ethanol)

7) Handling and storage

Handling:

Instructions for safe handling:

In accordance with laboratory guidelines of Employers' Accident Liability Insurance Association (BG-Chemie)

Instructions on fire and explosion protection:

No particular measures required.

Storage:

Requirements for storage areas and containers:

Store at 2-8°C

Incompatible materials:

Store separately from foodstuffs.

Further information on storage requirements:

Store in well sealed containers.

MATERIAL SAFETY DATA SHEET

Storage category:

LGK 10-13 Other liquids and solids

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV): -

8) Exposure controls/Personal protection

Exposure:

Occupational exposure:

not applicable

Biological exposure:

not applicable

Engineering controls:

no measures must be taken

Personal protective equipment:

General protective and hygiene measures:

Keep separate from foodstuffs, beverages and animal feed.

Immediately remove soiled or saturated clothing.

Wash hands before breaks and after finishing work.

Avoid contact with the eyes and skin.

Protective gloves

Since the product is a preparation made up of several substances, the reliability of glove material cannot be predicted in advanced and must therefore be tested before being put into use.

We suggest Chemical protection gloves, which are tested according to EN 374.

Glove material

The choice of a suitable glove depends not only on the material, but also on other quality characteristics and varies from manufacturer to manufacturer.

We suggest NBR (Nitrile rubber)/thickness: >0,11 mm

Penetration time of the glove material

Information about the exact penetration time has to be obtained from the manufacturer and must be observed.

We suggest >480 minutes (permeation: level 6)

Eye protection

Tight-fitting protective goggles

9) Physical and chemical properties

not applicable

The data for each product can be found in the corresponding MSDS attached.

10) Stability and reactivity

not applicable

The data for each product can be found in the corresponding MSDS attached.

11) Toxicological information

Acute toxicity:

Classification relevant LD/LC50 values:

There is no quantitative data on the toxicity of this product.

On the skin:

Not to be classified as corrosive or irritant to skin.

On the eye:

Not to be classified as seriously damaging to the eye.

Not to be classified as eye irritant.

Inhalation:

Not to be classified as respiratory sensitizer.

Specific target organ toxicity:

Single exposure:

Not to be classified as specific target toxic on single exposure.

Repeated exposure:

Not to be classified as specific target toxic on repeated exposure.

Symptoms:

On skin:

no data available

Swallowed:

no data available

Inhaled:

no data available

Further information: The product is to be handled with the care necessary when dealing with chemicals.

12) Ecological information

not applicable

The data for each product can be found in the corresponding MSDS attached.

MATERIAL SAFETY DATA SHEET

13) Disposal considerations

Product:

Recommendation:

Waste disposal requirements vary among the federal states and local councils, so that inquiries should be made about the type of waste disposal at the local authority in question.

Soiled packaging:

Recommendation: Disposal according to official regulations.

14) Transport information

Land transport ADR/RID and GGVS/GGVE (crossborder/inland): -

ADR/RID-GGVS/E Class: -

Remarks: Not subject to transport regulations.

15) Regulatory information

Identification according to EEC guidelines:

According to EEC guidelines/GefStoffV, there are no specific identification requirements for the product.

National regulations:

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV)

Water hazard class: Water hazard class 1 (self estimate): low water hazard.

16) Other information

Information is based on our present knowledge; this shall not constitute a guarantee for any product features nor establish a contractual legal relationship.

Datasheet-issuing department: Product management

Contact person: Dr. Heumann

Date of latest revision: 06.12.2018

MATERIAL SAFETY DATA SHEET

1) Identification

Trade names:	SILAC RPMI, without L-Lysine, L-Arginine and L-Glutamine
Article No.:	761513006/283004300/283011200/ 283001300/283001200
Supplier :	Silantes GmbH Gollierstr. 70c D-80339 Munich Tel.: +49(0)89 500 941 0 Fax: +49(0)89 500 941 29 E-mail: info@silantes.com
Emergency phone number:	+49(0)89 500 941 0 Language: English Monday to Friday From 10:00 to 15:00 (CET)
Recommended use:	research only
Restrictions on use:	not for human use

The product does not meet the specifications of any of the hazard classes outlined by the Globally Harmonized System of Classification and Labelling of Chemicals.*

Therefore it is not necessary for this MSDS to be in compliance with the GHS.

*Canada: Schedule 2 of the Hazardous Product Act (R.S.C., 1985, c. H-3), Current to November 20, 2018 last amended on May 23, 2018

*United States of America: OSHA, 29 CFR 1910.1200(g) and Appendix A and B

2) Hazard identification

Hazard classification:

Not hazardous products within the meaning of Guideline 67/548/EEC

Label elements:

The product is exempt from the specific labeling requirements on the basis of the calculation procedures of the "General Classification Guidelines for Preparations in the EU" in the latest valid version.

Signal word: not required

MATERIAL SAFETY DATA SHEET

Other hazards:

not applicable

Additional information: Chemicals are by their nature hazardous substances. They are therefore only to be handled by appropriately trained personnel exercising the necessary diligence.

3) Composition/Information on ingredients

The product does not contain any hazardous material or substance.

Chemical name:

SILAC RPMI

Common name/Synonyms:

see above

Chemical characterization:

SILAC RPMI, without L-Lysine, L-Arginine and L-Glutamine

Content:

see above

4) First-aid measures

General instructions:

Remove clothing contaminated with product immediately.

Inhalation:

Inhale fresh air

Skin contact:

Wash off immediately with water

Contact with eyes:

Lift eyelids and rinse eyes for 10 minutes under running water. Seek medical attention if discomfort continues.

Ingestion:

Rinse out mouth and have affected person drink a glass of water. Do not induce vomiting. If discomfort continues, consult a medical doctor.

Symptoms:

One may feel slight discomfort after ingesting product.

No other symptoms known.

5) Fire-fighting measures

Product is neither self-igniting nor flammable.

Extinguish with:

Consider fire surroundings and choose fire-fighting measures accordingly.

water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

MATERIAL SAFETY DATA SHEET

Do not extinguish with:

water jet

Equipment for fire-fighting:

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

Hazards arising from fire:

none

6) Accidental release measures

Personal measures/protective equipment:

Wipe up with absorbent material (e.g. cloth, fleece).

Environmental measures:

Do not allow to enter the canalization/surface water/ground water systems

Cleansing/absorption material:

Absorbent material (e.g. cloth, fleece, paper towel).

Cleansing/absorption procedures:

Absorb mechanically, clean spill site after absorption (e.g. Ethanol)

7) Handling and storage

Handling:

Instructions for safe handling:

In accordance with laboratory guidelines of Employers' Accident Liability Insurance Association (BG-Chemie)

Instructions on fire and explosion protection:

No particular measures required.

Storage:

Requirements for storage areas and containers:

store at 2-8°C

Incompatible materials:

Store separately from foodstuffs.

Further information on storage requirements:

Store in well sealed containers.

Storage category:

LGK 10-13 Other liquids and solids

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV): -

8) Exposure controls/Personal protection

Exposure:

Occupational exposure:

not applicable

Biological exposure:

not applicable

Engineering controls:

no measures must be taken

Ingredients with limit values that require monitoring at the workplace:

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

Personal protective equipment:

General protective and hygiene measures:

Keep separate from foodstuffs, beverages and animal feed.

Immediately remove soiled or saturated clothing.

Wash hands before breaks and after finishing work.

Avoid contact with the eyes and skin.

Protective gloves

Since the product is a preparation made up of several substances, the reliability of glove material cannot be predicted in advanced and must therefore be tested before being put into use.

We suggest Chemical protection gloves, which are tested according to EN 374.

Glove material

The choice of a suitable glove depends not only on the material, but also on other quality characteristics and varies from manufacturer to manufacturer.

We suggest NBR (Nitrile rubber)/thickness: >0,11 mm

Penetration time of the glove material

Information about the exact penetration time has to be obtained from the manufacturer and must be observed.

We suggest >480 minutes (permeation: level 6)

Eye protection

Tight-fitting protective goggles

9) Physical and chemical properties

Appearance:

Form:	liquid
Color:	light red
Odour:	odourless
Odour threshold:	No data available

Melting/Freezing point: no data available

Boiling point/boiling range: no data available

Flash point: Not applicable

Evaporation rate: no data available

Flammability (solid; gas): Not applicable

Lower flammable/explosive limit: The product does not present an explosion hazard

Upper flammable/explosive limit: The product does not present an explosion hazard

Self-igniting: The product is not self-igniting

Vapour pressure: no data available

Vapour density: no data available

Relative density: no data available

Solubility: no data available

Partition coefficient-n-octanol/water: no data available

Auto-ignition temperature: no data available

Decomposition temperature: no data available

Viscosity: no data available

10) Stability and reactivity

Reactivity:

This product is not reactive under normal ambient conditions.

Chemical stability:

The product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions to be avoided:

above storage temperature specified in section 7

Substances to be avoided:

There is no additional information on incompatible materials.

Hazardous reactions:

There are no known hazardous reactions.

Hazardous decomposition products:

None

11) Toxicological information

Acute toxicity:

Classification relevant LD/LC50 values:

There is no quantitative data on the toxicity of this product.

On the skin:

Not to be classified as corrosive or irritant to skin.

On the eye:

Not to be classified as seriously damaging to the eye.

Not to be classified as eye irritant.

Inhalation:

Not to be classified as respiratory sensitizer.

Specific target organ toxicity:

Single exposure:

Not to be classified as specific target toxic on single exposure.

Repeated exposure:

Not to be classified as specific target toxic on repeated exposure.

Symptoms:

On skin:

no data available

Swallowed:

no data available

Inhaled:

no data available

Further information: The product is to be handled with the care necessary when dealing with chemicals.

12) Ecological information

General information:

Water hazard class 1 (self estimate): low water hazard

Not to be allowed to enter into groundwater, watercourses or canalization.

Aquatic toxicity:

We have no quantitative data on the ecological effects of this product.

Degradability:

The product is biodegradable.

Mobility in Soil

no data available

Bioaccumulative potential

No significant accumulation in organisms.

MATERIAL SAFETY DATA SHEET

13) Disposal considerations

Product:

Recommendation:

Waste disposal requirements vary among the federal states and local councils, so that inquiries should be made about the type of waste disposal at the local authority in question.

Soiled packaging:

Recommendation: Disposal according to official regulations.

14) Transport information

Land transport ADR/RID and GGVS/GGVE (crossborder/inland): -

ADR/RID-GGVS/E Class: -

Remarks: Not subject to transport regulations.

15) Regulatory information

Identification according to EEC guidelines:

According to EEC guidelines/GefStoffV, there are no specific identification requirements for the product.

National regulations:

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV)

Water hazard class: Water hazard class 1 (self estimate): low water hazard.

16) Other information

Information is based on our present knowledge; this shall not constitute a guarantee for any product features nor establish a contractual legal relationship.

Datasheet-issuing department: Product management

Contact person: Dr. Heumann

Date of latest revision: 10.12.2018

MATERIAL SAFETY DATA SHEET

1) Identification

Trade names:	SILAC Fetal Bovine Serum (FBS), dialyzed and sterile, unlabeled, EU approved
Article No.:	281000800/281000900/281001000/ 281001200/761513002
Supplier :	Silantes GmbH Gollierstr. 70c D-80339 Munich Tel.: +49(0)89 500 941 0 Fax: +49(0)89 500 941 29 E-mail: info@silantes.com
Emergency phone number:	+49(0)89 500 941 0 Language: English Monday to Friday From 10:00 to 15:00 (CET)
Recommended use:	research only
Restrictions on use:	not for human use

The product does not meet the specifications of any of the hazard classes outlined by the Globally Harmonized System of Classification and Labelling of Chemicals.*

Therefore it is not necessary for this MSDS to be in compliance with the GHS.

*Canada: Schedule 2 of the Hazardous Product Act (R.S.C., 1985, c. H-3), Current to November 20, 2018 last amended on May 23, 2018

*United States of America: OSHA, 29 CFR 1910.1200(g) and Appendix A and B

2) Hazard identification

Hazard classification:

Not hazardous products within the meaning of Guideline 67/548/EEC

Label elements:

The product is exempt from the specific labeling requirements on the basis of the calculation procedures of the "General Classification Guidelines for Preparations in the EU" in the latest valid version.

Signal word: not required

MATERIAL SAFETY DATA SHEET

Other hazards:

not applicable

Additional information: Chemicals are by their nature hazardous substances. They are therefore only to be handled by appropriately trained personnel exercising the necessary diligence.

3) Composition/Information on ingredients

The product does not contain any hazardous material or substance.

Chemical name:

SILAC Fetal Bovine Serum (FBS)

Common name/Synonyms:

see above

Chemical characterization:

SILAC Fetal Bovine Serum (FBS), dialyzed and sterile, unlabeled

Content:

see above

4) First-aid measures

General instructions:

Remove clothing contaminated with product immediately.

Inhalation:

Inhale fresh air

Skin contact:

Wash off immediately with water

Contact with eyes:

Lift eyelids and rinse eyes for 10 minutes under running water. Seek medical attention if discomfort continues.

Ingestion:

Rinse out mouth and have affected person drink a glass of water. Do not induce vomiting. If discomfort continues, consult a medical doctor.

Symptoms:

One may feel slight discomfort after ingesting product.

No other symptoms known.

MATERIAL SAFETY DATA SHEET

5) Fire-fighting measures

Product is neither self-igniting nor flammable.

Extinguish with:

Consider fire surroundings and choose fire-fighting measures accordingly.

water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

Do not extinguish with:

water jet

Equipment for fire-fighting:

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

Hazards arising from fire:

none

6) Accidental release measures

Personal measures/protective equipment:

Wipe up with absorbent material (e.g. cloth, fleece).

Environmental measures:

Do not allow to enter the canalization/surface water/ground water systems

Cleansing/absorption material:

Absorbent material (e.g. cloth, fleece, paper towel).

Cleansing/absorption procedures:

Absorb mechanically, clean spill site after absorption (e.g. Ethanol)

7) Handling and storage

Handling:

Instructions for safe handling:

In accordance with laboratory guidelines of Employers' Accident Liability Insurance Association (BG-Chemie)

Instructions on fire and explosion protection:

No particular measures required.

Storage:

Requirements for storage areas and containers:

store at $\leq -15^{\circ}\text{C}$

Incompatible materials:

Store separately from foodstuffs.

Further information on storage requirements:

Store in well sealed containers.

MATERIAL SAFETY DATA SHEET

Storage category:

LGK 10-13 Other liquids and solids

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV): -

8) Exposure controls/Personal protection

Exposure:

Occupational exposure:

not applicable

Biological exposure:

not applicable

Engineering controls:

no measures must be taken

Ingredients with limit values that require monitoring at the workplace:

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

Personal protective equipment:

General protective and hygiene measures:

Keep separate from foodstuffs, beverages and animal feed.

Immediately remove soiled or saturated clothing.

Wash hands before breaks and after finishing work.

Avoid contact with the eyes and skin.

Protective gloves

Since the product is a preparation made up of several substances, the reliability of glove material cannot be predicted in advanced and must therefore be tested before being put into use.

We suggest Chemical protection gloves, which are tested according to EN 374.

Glove material

The choice of a suitable glove depends not only on the material, but also on other quality characteristics and varies from manufacturer to manufacturer.

We suggest NBR (Nitrile rubber)/thickness: >0,11 mm

Penetration time of the glove material

Information about the exact penetration time has to be obtained from the manufacturer and must be observed.

We suggest >480 minutes (permeation: level 6)

Eye protection

Tight-fitting protective goggles

9) Physical and chemical properties

Appearance:

Form:	liquid
Color:	maroon
Odour:	odourless
Odour threshold:	no data available

Melting/Freezing point: no data available

Boiling point/boiling range: no data available

Flash point: Not applicable

Evaporation rate: no data available

Flammability (solid; gas): Not applicable

Lower flammable/explosive limit: The product does not present an explosion hazard

Upper flammable/explosive limit: The product does not present an explosion hazard

Self-igniting: The product is not self-igniting

Vapour pressure: no data available

Vapour density: no data available

Relative density: no data available

Solubility: no data available

Partition coefficient-n-octanol/water: no data available

Auto-ignition temperature: no data available

Decomposition temperature: no data available

Viscosity: no data available

10) Stability and reactivity

Reactivity:

This product is not reactive under normal ambient conditions.

Chemical stability:

The product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions to be avoided:

above storage temperature specified in section 7

Substances to be avoided:

There is no additional information on incompatible materials.

Hazardous reactions:

There are no known hazardous reactions.

Hazardous decomposition products:

None

11) Toxicological information

Acute toxicity:

Classification relevant LD/LC50 values:

There is no quantitative data on the toxicity of this product.

On the skin:

Not to be classified as corrosive or irritant to skin.

On the eye:

Not to be classified as seriously damaging to the eye.

Not to be classified as eye irritant.

Inhalation:

Not to be classified as respiratory sensitizer.

Specific target organ toxicity:

Single exposure:

Not to be classified as specific target toxic on single exposure.

Repeated exposure:

Not to be classified as specific target toxic on repeated exposure.

Symptoms:

On skin:

no data available

Swallowed:

no data available

Inhaled:

no data available

Further information: The product is to be handled with the care necessary when dealing with chemicals.

12) Ecological information

General information:

Water hazard class 1 (self estimate): low water hazard

Not to be allowed to enter into groundwater, watercourses or canalization.

Aquatic toxicity:

We have no quantitative data on the ecological effects of this product.

Degradability:

The product is biodegradable.

Mobility in Soil

no data available

Bioaccumulative potential

No significant accumulation in organisms.

MATERIAL SAFETY DATA SHEET

13) Disposal considerations

Product:

Recommendation:

Waste disposal requirements vary among the federal states and local councils, so that inquiries should be made about the type of waste disposal at the local authority in question.

Soiled packaging:

Recommendation: Disposal according to official regulations.

14) Transport information

Land transport ADR/RID and GGVS/GGVE (crossborder/inland): -

ADR/RID-GGVS/E Class: -

Remarks: Not subject to transport regulations.

15) Regulatory information

Identification according to EEC guidelines:

According to EEC guidelines/GefStoffV, there are no specific identification requirements for the product.

National regulations:

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV)

Water hazard class: Water hazard class 1 (self estimate): low water hazard.

16) Other information

Information is based on our present knowledge; this shall not constitute a guarantee for any product features nor establish a contractual legal relationship.

Datasheet-issuing department: Product management

Contact person: Dr. Heumann

Date of latest revision: 06.12.2018

MATERIAL SAFETY DATA SHEET

1) Identification

Trade names:	SILAC Amino Acid L-Lysine 0 for 500ml SILAC RPMI Media, unlabeled
Article No.:	287002806
Supplier :	Silantes GmbH Gollierstr. 70c D-80339 Munich Tel.: +49(0)89 500 941 0 Fax: +49(0)89 500 941 29 E-mail: info@silantes.com
Emergency phone number:	+49(0)89 500 941 0 Language: English Monday to Friday From 10:00 to 15:00 (CET)
Recommended use:	research only
Restrictions on use:	not for human use

The product does not meet the specifications of any of the hazard classes outlined by the Globally Harmonized System of Classification and Labelling of Chemicals.*

Therefore it is not necessary for this MSDS to be in compliance with the GHS.

*Canada: Schedule 2 of the Hazardous Product Act (R.S.C., 1985, c. H-3), Current to November 20, 2018 last amended on May 23, 2018

*United States of America: OSHA, 29 CFR 1910.1200(g) and Appendix A and B

2) Hazard identification

Hazard classification:

Not hazardous products within the meaning of Guideline 67/548/EEC

Label elements:

The product is exempt from the specific labeling requirements on the basis of the calculation procedures of the "General Classification Guidelines for Preparations in the EU" in the latest valid version.

Signal word: not required

MATERIAL SAFETY DATA SHEET

Other hazards:

not applicable

Additional information: Chemicals are by their nature hazardous substances. They are therefore only to be handled by appropriately trained personnel exercising the necessary diligence.

3) Composition/Information on ingredients

The product does not contain any hazardous material or substance.

Chemical name:

L-Lysine

Common name/Synonyms:

see above

Chemical characterization:

L-Lysine 0 for 500ml SILAC RPMI Media, unlabeled

Content:

see above

4) First-aid measures

General instructions:

Remove clothing contaminated with product immediately.

Inhalation:

Inhale fresh air

Skin contact:

Wash off immediately with water

Contact with eyes:

Lift eyelids and rinse eyes for 10 minutes under running water. Seek medical attention if discomfort continues.

Ingestion:

Rinse out mouth and have affected person drink a glass of water. Do not induce vomiting. If discomfort continues, consult a medical doctor.

Symptoms:

One may feel slight discomfort after ingesting product.

No other symptoms known.

5) Fire-fighting measures

Product is neither self-igniting nor flammable.

Extinguish with:

Consider fire surroundings and choose fire-fighting measures accordingly.

water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

MATERIAL SAFETY DATA SHEET

Do not extinguish with:

water jet

Equipment for fire-fighting:

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

Hazards arising from fire:

none

6) Accidental release measures

Personal measures/protective equipment:

Wipe up with absorbent material (e.g. cloth, fleece).

Environmental measures:

Do not allow to enter the canalization/surface water/ground water systems

Cleansing/absorption material:

Absorbent material (e.g. cloth, fleece, paper towel).

Cleansing/absorption procedures:

Absorb mechanically, clean spill site after absorption (e.g. Ethanol)

7) Handling and storage

Handling:

Instructions for safe handling:

In accordance with laboratory guidelines of Employers' Accident Liability Insurance Association (BG-Chemie)

Instructions on fire and explosion protection:

No particular measures required.

Storage:

Requirements for storage areas and containers:

store at $\leq -15^{\circ}\text{C}$

Incompatible materials:

Store separately from foodstuffs.

Further information on storage requirements:

Store in well sealed containers.

Storage category:

LGK 10-13 Other liquids and solids

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV): -

8) Exposure controls/Personal protection

Exposure:

Occupational exposure:

not applicable

Biological exposure:

not applicable

Engineering controls:

no measures must be taken

Ingredients with limit values that require monitoring at the workplace:

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

Personal protective equipment:

General protective and hygiene measures:

Keep separate from foodstuffs, beverages and animal feed.

Immediately remove soiled or saturated clothing.

Wash hands before breaks and after finishing work.

Avoid contact with the eyes and skin.

Protective gloves

Since the product is a preparation made up of several substances, the reliability of glove material cannot be predicted in advanced and must therefore be tested before being put into use.

We suggest Chemical protection gloves, which are tested according to EN 374.

Glove material

The choice of a suitable glove depends not only on the material, but also on other quality characteristics and varies from manufacturer to manufacturer.

We suggest NBR (Nitrile rubber)/thickness: >0,11 mm

Penetration time of the glove material

Information about the exact penetration time has to be obtained from the manufacturer and must be observed.

We suggest >480 minutes (permeation: level 6)

Eye protection

Tight-fitting protective goggles

MATERIAL SAFETY DATA SHEET

9) Physical and chemical properties

Appearance:

Form:	liquid
Color:	transparent
Odour:	odourless
Odour threshold:	No data available

Melting/Freezing point: no data available

Boiling point/boiling range: no data available

Flash point: Not applicable

Evaporation rate: no data available

Flammability (solid; gas): Not applicable

Lower flammable/explosive limit: The product does not present an explosion hazard

Upper flammable/explosive limit: The product does not present an explosion hazard

Self-igniting: The product is not self-igniting

Vapour pressure: no data available

Vapour density: no data available

Relative density: no data available

Solubility: no data available

Partition coefficient-n-octanol/water: no data available

Auto-ignition temperature: no data available

Decomposition temperature: no data available

Viscosity: no data available

10) Stability and reactivity

Reactivity:

This product is not reactive under normal ambient conditions.

Chemical stability:

The product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions to be avoided:

above storage temperature specified in section 7

Substances to be avoided:

There is no additional information on incompatible materials.

Hazardous reactions:

There are no known hazardous reactions.

Hazardous decomposition products:

None

11) Toxicological information

Acute toxicity:

Classification relevant LD/LC50 values:

There is no quantitative data on the toxicity of this product.

On the skin:

Not to be classified as corrosive or irritant to skin.

On the eye:

Not to be classified as seriously damaging to the eye.

Not to be classified as eye irritant.

Inhalation:

Not to be classified as respiratory sensitizer.

Specific target organ toxicity:

Single exposure:

Not to be classified as specific target toxic on single exposure.

Repeated exposure:

Not to be classified as specific target toxic on repeated exposure.

Symptoms:

On skin:

no data available

Swallowed:

no data available

Inhaled:

no data available

Further information: The product is to be handled with the care necessary when dealing with chemicals.

12) Ecological information

General information:

Water hazard class 1 (self estimate): low water hazard

Not to be allowed to enter into groundwater, watercourses or canalization.

Aquatic toxicity:

We have no quantitative data on the ecological effects of this product.

Degradability:

The product is biodegradable.

Mobility in Soil

no data available

Bioaccumulative potential

No significant accumulation in organisms.

13) Disposal considerations

Product:

Recommendation:

Waste disposal requirements vary among the federal states and local councils, so that inquiries should be made about the type of waste disposal at the local authority in question.

Soiled packaging:

Recommendation: Disposal according to official regulations.

14) Transport information

Land transport ADR/RID and GGVS/GGVE (crossborder/inland): -

ADR/RID-GGVS/E Class: -

Remarks: Not subject to transport regulations.

15) Regulatory information

Identification according to EEC guidelines:

According to EEC guidelines/GefStoffV, there are no specific identification requirements for the product.

National regulations:

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV)

Water hazard class: Water hazard class 1 (self estimate): low water hazard.

16) Other information

Information is based on our present knowledge; this shall not constitute a guarantee for any product features nor establish a contractual legal relationship.

Datasheet-issuing department: Product management

Contact person: Dr. Heumann

Date of latest revision: 06.12.2018

MATERIAL SAFETY DATA SHEET

1) Identification

Trade names:	SILAC Amino Acid L-Lysine 8 HCL for 500ml SILAC RPMI Media, 13C15N labeled
Article No.:	287982846
Supplier :	Silantes GmbH Gollierstr. 70c D-80339 Munich Tel.: +49(0)89 500 941 0 Fax: +49(0)89 500 941 29 E-mail: info@silantes.com
Emergency phone number:	+49(0)89 500 941 0 Language: English Monday to Friday From 10:00 to 15:00 (CET)
Recommended use:	research only
Restrictions on use:	not for human use

The product does not meet the specifications of any of the hazard classes outlined by the Globally Harmonized System of Classification and Labelling of Chemicals.*

Therefore it is not necessary for this MSDS to be in compliance with the GHS.

*Canada: Schedule 2 of the Hazardous Product Act (R.S.C., 1985,

c. H-3), Current to November 20, 2018 last amended on May 23, 2018

*United States of America: OSHA, 29 CFR 1910.1200(g) and

Appendix A and B

2) Hazard identification

Hazard classification:

Not hazardous products within the meaning of Guideline 67/548/EEC

Label elements:

The product is exempt from the specific labeling requirements on the basis of the calculation procedures of the "General Classification Guidelines for Preparations in the EU" in the latest valid version.

Signal word: not required

MATERIAL SAFETY DATA SHEET

Other hazards:

not applicable

Additional information: Chemicals are by their nature hazardous substances. They are therefore only to be handled by appropriately trained personnel exercising the necessary diligence.

3) Composition/Information on ingredients

The product does not contain any hazardous material or substance.

Chemical name:

L-Lysine 8 HCL

Common name/Synonyms:

see above

Chemical characterization:

L-Lysine 8 HCL for 500ml SILAC RPMI Media, 13C15N labeled

Content:

see above

4) First-aid measures

General instructions:

Remove clothing contaminated with product immediately.

Inhalation:

Inhale fresh air

Skin contact:

Wash off immediately with water

Contact with eyes:

Lift eyelids and rinse eyes for 10 minutes under running water. Seek medical attention if discomfort continues.

Ingestion:

Rinse out mouth and have affected person drink a glass of water. Do not induce vomiting. If discomfort continues, consult a medical doctor.

Symptoms:

One may feel slight discomfort after ingesting product.

No other symptoms known.

5) Fire-fighting measures

Product is neither self-igniting nor flammable.

Extinguish with:

Consider fire surroundings and choose fire-fighting measures accordingly.

water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

MATERIAL SAFETY DATA SHEET

Do not extinguish with:

water jet

Equipment for fire-fighting:

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

Hazards arising from fire:

none

6) Accidental release measures

Personal measures/protective equipment:

Wipe up with absorbent material (e.g. cloth, fleece).

Environmental measures:

Do not allow to enter the canalization/surface water/ground water systems

Cleansing/absorption material:

Absorbent material (e.g. cloth, fleece, paper towel).

Cleansing/absorption procedures:

Absorb mechanically, clean spill site after absorption (e.g. Ethanol)

7) Handling and storage

Handling:

Instructions for safe handling:

In accordance with laboratory guidelines of Employers' Accident Liability Insurance Association (BG-Chemie)

Instructions on fire and explosion protection:

No particular measures required.

Storage:

Requirements for storage areas and containers:

store at $\leq -15^{\circ}\text{C}$

Incompatible materials:

Store separately from foodstuffs.

Further information on storage requirements:

Store in well sealed containers.

Storage category:

LGK 10-13 Other liquids and solids

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV): -

8) Exposure controls/Personal protection

Exposure:

Occupational exposure:

not applicable

Biological exposure:

not applicable

Engineering controls:

no measures must be taken

Ingredients with limit values that require monitoring at the workplace:

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

Personal protective equipment:

General protective and hygiene measures:

Keep separate from foodstuffs, beverages and animal feed.

Immediately remove soiled or saturated clothing.

Wash hands before breaks and after finishing work.

Avoid contact with the eyes and skin.

Protective gloves

Since the product is a preparation made up of several substances, the reliability of glove material cannot be predicted in advanced and must therefore be tested before being put into use.

We suggest Chemical protection gloves, which are tested according to EN 374.

Glove material

The choice of a suitable glove depends not only on the material, but also on other quality characteristics and varies from manufacturer to manufacturer.

We suggest NBR (Nitrile rubber)/thickness: >0,11 mm

Penetration time of the glove material

Information about the exact penetration time has to be obtained from the manufacturer and must be observed.

We suggest >480 minutes (permeation: level 6)

Eye protection

Tight-fitting protective goggles

9) Physical and chemical properties

Appearance:

Form:	liquid
Color:	transparent
Odour:	odourless
Odour threshold:	No data available

Melting/Freezing point: no data available

Boiling point/boiling range: no data available

Flash point: Not applicable

Evaporation rate: no data available

Flammability (solid; gas): Not applicable

Lower flammable/explosive limit: The product does not present an explosion hazard

Upper flammable/explosive limit: The product does not present an explosion hazard

Self-igniting: The product is not self-igniting

Vapour pressure: no data available

Vapour density: no data available

Relative density: no data available

Solubility: no data available

Partition coefficient-n-octanol/water: no data available

Auto-ignition temperature: no data available

Decomposition temperature: no data available

Viscosity: no data available

10) Stability and reactivity

Reactivity:

This product is not reactive under normal ambient conditions.

Chemical stability:

The product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions to be avoided:

above storage temperature specified in section 7

Substances to be avoided:

There is no additional information on incompatible materials.

Hazardous reactions:

There are no known hazardous reactions.

Hazardous decomposition products:

None

11) Toxicological information

Acute toxicity:

Classification relevant LD/LC50 values:

There is no quantitative data on the toxicity of this product.

On the skin:

Not to be classified as corrosive or irritant to skin.

On the eye:

Not to be classified as seriously damaging to the eye.

Not to be classified as eye irritant.

Inhalation:

Not to be classified as respiratory sensitizer.

Specific target organ toxicity:

Single exposure:

Not to be classified as specific target toxic on single exposure.

Repeated exposure:

Not to be classified as specific target toxic on repeated exposure.

Symptoms:

On skin:

no data available

Swallowed:

no data available

Inhaled:

no data available

Further information: The product is to be handled with the care necessary when dealing with chemicals.

12) Ecological information

General information:

Water hazard class 1 (self estimate): low water hazard

Not to be allowed to enter into groundwater, watercourses or canalization.

Aquatic toxicity:

We have no quantitative data on the ecological effects of this product.

Degradability:

The product is biodegradable.

Mobility in Soil

no data available

Bioaccumulative potential

MATERIAL SAFETY DATA SHEET

No significant accumulation in organisms.

13) Disposal considerations

Product:

Recommendation:

Waste disposal requirements vary among the federal states and local councils, so that inquiries should be made about the type of waste disposal at the local authority in question.

Soiled packaging:

Recommendation: Disposal according to official regulations.

14) Transport information

Land transport ADR/RID and GGVS/GGVE (crossborder/inland): -

ADR/RID-GGVS/E Class: -

Remarks: Not subject to transport regulations.

15) Regulatory information

Identification according to EEC guidelines:

According to EEC guidelines/GefStoffV, there are no specific identification requirements for the product.

National regulations:

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV)

Water hazard class: Water hazard class 1 (self estimate): low water hazard.

16) Other information

Information is based on our present knowledge; this shall not constitute a guarantee for any product features nor establish a contractual legal relationship.

Datasheet-issuing department: Product management

Contact person: Dr. Heumann

Date of latest revision: 06.12.2018

1) Identification

Trade names:	SILAC Amino Acid L-Arginine 0 for 500ml SILAC RPMI Media, unlabeled
Article No.:	287002860
Supplier :	Silantes GmbH Gollierstr. 70c D-80339 Munich Tel.: +49(0)89 500 941 0 Fax: +49(0)89 500 941 29 E-mail: info@silantes.com
Emergency phone number:	+49(0)89 500 941 0 Language: English Monday to Friday From 10:00 to 15:00 (CET)
Recommended use:	research only
Restrictions on use:	not for human use

The product does not meet the specifications of any of the hazard classes outlined by the Globally Harmonized System of Classification and Labelling of Chemicals.*

Therefore it is not necessary for this MSDS to be in compliance with the GHS.

*Canada: Schedule 2 of the Hazardous Product Act (R.S.C., 1985, c. H-3), Current to November 20, 2018 last amended on May 23, 2018

*United States of America: OSHA, 29 CFR 1910.1200(g) and Appendix A and B

2) Hazard identification

Hazard classification:

Not hazardous products within the meaning of
Guideline 67/548/EEC

Label elements:

The product is exempt from the specific labeling requirements on the basis of the calculation procedures of the "General Classification Guidelines for Preparations in the EU" in the latest valid version.

Signal word: not required

MATERIAL SAFETY DATA SHEET

Other hazards:

not applicable

Additional information: Chemicals are by their nature hazardous substances. They are therefore only to be handled by appropriately trained personnel exercising the necessary diligence.

3) Composition/Information on ingredients

The product does not contain any hazardous material or substance.

Chemical name:

L-Arginine

Common name/Synonyms:

see above

Chemical characterization:

L-Arginine 0 for 500ml SILAC RPMI Media, unlabeled

Content:

see above

4) First-aid measures

General instructions:

Remove clothing contaminated with product immediately.

Inhalation:

Inhale fresh air

Skin contact:

Wash off immediately with water

Contact with eyes:

Lift eyelids and rinse eyes for 10 minutes under running water. Seek medical attention if discomfort continues.

Ingestion:

Rinse out mouth and have affected person drink a glass of water. Do not induce vomiting. If discomfort continues, consult a medical doctor.

Symptoms:

One may feel slight discomfort after ingesting product.

No other symptoms known.

5) Fire-fighting measures

Product is neither self-igniting nor flammable.

Extinguish with:

Consider fire surroundings and choose fire-fighting measures accordingly.

water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

MATERIAL SAFETY DATA SHEET

Do not extinguish with:

water jet

Equipment for fire-fighting:

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

Hazards arising from fire:

none

6) Accidental release measures

Personal measures/protective equipment:

Wipe up with absorbent material (e.g. cloth, fleece).

Environmental measures:

Do not allow to enter the canalization/surface water/ground water systems

Cleansing/absorption material:

Absorbent material (e.g. cloth, fleece, paper towel).

Cleansing/absorption procedures:

Absorb mechanically, clean spill site after absorption (e.g. Ethanol)

7) Handling and storage

Handling:

Instructions for safe handling:

In accordance with laboratory guidelines of Employers' Accident Liability Insurance Association (BG-Chemie)

Instructions on fire and explosion protection:

No particular measures required.

Storage:

Requirements for storage areas and containers:

store at $\leq -15^{\circ}\text{C}$

Incompatible materials:

Store separately from foodstuffs.

Further information on storage requirements:

Store in well sealed containers.

Storage category:

LGK 10-13 Other liquids and solids

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV): -

8) Exposure controls/Personal protection

Exposure:

Occupational exposure:

not applicable

Biological exposure:

not applicable

Engineering controls:

no measures must be taken

Ingredients with limit values that require monitoring at the workplace:

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

Personal protective equipment:

General protective and hygiene measures:

Keep separate from foodstuffs, beverages and animal feed.

Immediately remove soiled or saturated clothing.

Wash hands before breaks and after finishing work.

Avoid contact with the eyes and skin.

Protective gloves

Since the product is a preparation made up of several substances, the reliability of glove material cannot be predicted in advanced and must therefore be tested before being put into use.

We suggest Chemical protection gloves, which are tested according to EN 374.

Glove material

The choice of a suitable glove depends not only on the material, but also on other quality characteristics and varies from manufacturer to manufacturer.

We suggest NBR (Nitrile rubber)/thickness: >0,11 mm

Penetration time of the glove material

Information about the exact penetration time has to be obtained from the manufacturer and must be observed.

We suggest >480 minutes (permeation: level 6)

Eye protection

Tight-fitting protective goggles

9) Physical and chemical properties

Appearance:

Form:	liquid
Color:	transparent
Odour:	odourless
Odour threshold:	No data available

Melting/Freezing point: no data available

Boiling point/boiling range: no data available

Flash point: Not applicable

Evaporation rate: no data available

Flammability (solid; gas): Not applicable

Lower flammable/explosive limit: The product does not present an explosion hazard

Upper flammable/explosive limit: The product does not present an explosion hazard

Self-igniting: The product is not self-igniting

Vapour pressure: no data available

Vapour density: no data available

Relative density: no data available

Solubility: no data available

Partition coefficient-n-octanol/water: no data available

Auto-ignition temperature: no data available

Decomposition temperature: no data available

Viscosity: no data available

10) Stability and reactivity

Reactivity:

This product is not reactive under normal ambient conditions.

Chemical stability:

The product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions to be avoided:

above storage temperature specified in section 7

Substances to be avoided:

There is no additional information on incompatible materials.

Hazardous reactions:

There are no known hazardous reactions.

Hazardous decomposition products:

None

11) Toxicological information

Acute toxicity:

Classification relevant LD/LC50 values:

There is no quantitative data on the toxicity of this product.

On the skin:

Not to be classified as corrosive or irritant to skin.

On the eye:

Not to be classified as seriously damaging to the eye.

Not to be classified as eye irritant.

Inhalation:

Not to be classified as respiratory sensitizer.

Specific target organ toxicity:

Single exposure:

Not to be classified as specific target toxic on single exposure.

Repeated exposure:

Not to be classified as specific target toxic on repeated exposure.

Symptoms:

On skin:

no data available

Swallowed:

no data available

Inhaled:

no data available

Further information: The product is to be handled with the care necessary when dealing with chemicals.

12) Ecological information

General information:

Water hazard class 1 (self estimate): low water hazard

Not to be allowed to enter into groundwater, watercourses or canalization.

Aquatic toxicity:

We have no quantitative data on the ecological effects of this product.

Degradability:

The product is biodegradable.

Mobility in Soil

no data available

Bioaccumulative potential

No significant accumulation in organisms.

13) Disposal considerations

Product:

Recommendation:

Waste disposal requirements vary among the federal states and local councils, so that inquiries should be made about the type of waste disposal at the local authority in question.

Soiled packaging:

Recommendation: Disposal according to official regulations.

14) Transport information

Land transport ADR/RID and GGVS/GGVE (crossborder/inland): -

ADR/RID-GGVS/E Class: -

Remarks: Not subject to transport regulations.

15) Regulatory information

Identification according to EEC guidelines:

According to EEC guidelines/GefStoffV, there are no specific identification requirements for the product.

National regulations:

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV)

Water hazard class: Water hazard class 1 (self estimate): low water hazard.

16) Other information

Information is based on our present knowledge; this shall not constitute a guarantee for any product features nor establish a contractual legal relationship.

Datasheet-issuing department: Product management

Contact person: Dr. Heumann

Date of latest revision: 06.12.2018

MATERIAL SAFETY DATA SHEET

1) Identification

Trade names:	SILAC Amino Acid L-Arginine 10 HCL for 500ml SILAC RPMI Media, 13C15N labeled
Article No.:	287982864
Supplier :	Silantes GmbH Gollierstr. 70c D-80339 Munich Tel.: +49(0)89 500 941 0 Fax: +49(0)89 500 941 29 E-mail: info@silantes.com
Emergency phone number:	+49(0)89 500 941 0 Language: English Monday to Friday From 10:00 to 15:00 (CET)
Recommended use:	research only
Restrictions on use:	not for human use

The product does not meet the specifications of any of the hazard classes outlined by the Globally Harmonized System of Classification and Labelling of Chemicals.*

Therefore it is not necessary for this MSDS to be in compliance with the GHS.

*Canada: Schedule 2 of the Hazardous Product Act (R.S.C., 1985, c. H-3), Current to November 20, 2018 last amended on May 23, 2018

*United States of America: OSHA, 29 CFR 1910.1200(g) and Appendix A and B

2) Hazard identification

Hazard classification:

Not hazardous products within the meaning of
Guideline 67/548/EEC

Label elements:

The product is exempt from the specific labeling requirements on the basis of the calculation procedures of the "General Classification Guidelines for Preparations in the EU" in the latest valid version.

Signal word: not required

MATERIAL SAFETY DATA SHEET

Other hazards:

not applicable

Additional information: Chemicals are by their nature hazardous substances. They are therefore only to be handled by appropriately trained personnel exercising the necessary diligence.

3) Composition/Information on ingredients

The product does not contain any hazardous material or substance.

Chemical name:

L-Arginine 10 HCL

Common name/Synonyms:

see above

Chemical characterization:

L-Arginine 10 HCL for 500ml SILAC RPMI Media, 13C15N labeled

Content:

see above

4) First-aid measures

General instructions:

Remove clothing contaminated with product immediately.

Inhalation:

Inhale fresh air

Skin contact:

Wash off immediately with water

Contact with eyes:

Lift eyelids and rinse eyes for 10 minutes under running water. Seek medical attention if discomfort continues.

Ingestion:

Rinse out mouth and have affected person drink a glass of water. Do not induce vomiting. If discomfort continues, consult a medical doctor.

Symptoms:

One may feel slight discomfort after ingesting product.

No other symptoms known.

5) Fire-fighting measures

Product is neither self-igniting nor flammable.

Extinguish with:

Consider fire surroundings and choose fire-fighting measures accordingly.

water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

MATERIAL SAFETY DATA SHEET

Do not extinguish with:

water jet

Equipment for fire-fighting:

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

Hazards arising from fire:

none

6) Accidental release measures

Personal measures/protective equipment:

Wipe up with absorbent material (e.g. cloth, fleece).

Environmental measures:

Do not allow to enter the canalization/surface water/ground water systems

Cleansing/absorption material:

Absorbent material (e.g. cloth, fleece, paper towel).

Cleansing/absorption procedures:

Absorb mechanically, clean spill site after absorption (e.g. Ethanol)

7) Handling and storage

Handling:

Instructions for safe handling:

In accordance with laboratory guidelines of Employers' Accident Liability Insurance Association (BG-Chemie)

Instructions on fire and explosion protection:

No particular measures required.

Storage:

Requirements for storage areas and containers:

store at $\leq -15^{\circ}\text{C}$

Incompatible materials:

Store separately from foodstuffs.

Further information on storage requirements:

Store in well sealed containers.

Storage category:

LGK 10-13 Other liquids and solids

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV): -

8) Exposure controls/Personal protection

Exposure:

Occupational exposure:

not applicable

Biological exposure:

not applicable

Engineering controls:

no measures must be taken

Ingredients with limit values that require monitoring at the workplace:

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

Personal protective equipment:

General protective and hygiene measures:

Keep separate from foodstuffs, beverages and animal feed.

Immediately remove soiled or saturated clothing.

Wash hands before breaks and after finishing work.

Avoid contact with the eyes and skin.

Protective gloves

Since the product is a preparation made up of several substances, the reliability of glove material cannot be predicted in advanced and must therefore be tested before being put into use.

We suggest Chemical protection gloves, which are tested according to EN 374.

Glove material

The choice of a suitable glove depends not only on the material, but also on other quality characteristics and varies from manufacturer to manufacturer.

We suggest NBR (Nitrile rubber)/thickness: >0,11 mm

Penetration time of the glove material

Information about the exact penetration time has to be obtained from the manufacturer and must be observed.

We suggest >480 minutes (permeation: level 6)

Eye protection

Tight-fitting protective goggles

MATERIAL SAFETY DATA SHEET

9) Physical and chemical properties

Appearance:

Form:	liquid
Color:	transparent
Odour:	odourless
Odour threshold:	No data available

Melting/Freezing point: no data available

Boiling point/boiling range: no data available

Flash point: Not applicable

Evaporation rate: no data available

Flammability (solid; gas): Not applicable

Lower flammable/explosive limit: The product does not present an explosion hazard

Upper flammable/explosive limit: The product does not present an explosion hazard

Self-igniting: The product is not self-igniting

Vapour pressure: no data available

Vapour density: no data available

Relative density: no data available

Solubility: no data available

Partition coefficient-n-octanol/water: no data available

Auto-ignition temperature: no data available

Decomposition temperature: no data available

Viscosity: no data available

10) Stability and reactivity

Reactivity:

This product is not reactive under normal ambient conditions.

Chemical stability:

The product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions to be avoided:

above storage temperature specified in section 7

Substances to be avoided:

There is no additional information on incompatible materials.

Hazardous reactions:

There are no known hazardous reactions.

Hazardous decomposition products:

None

11) Toxicological information

Acute toxicity:

Classification relevant LD/LC50 values:

There is no quantitative data on the toxicity of this product.

On the skin:

Not to be classified as corrosive or irritant to skin.

On the eye:

Not to be classified as seriously damaging to the eye.

Not to be classified as eye irritant.

Inhalation:

Not to be classified as respiratory sensitizer.

Specific target organ toxicity:

Single exposure:

Not to be classified as specific target toxic on single exposure.

Repeated exposure:

Not to be classified as specific target toxic on repeated exposure.

Symptoms:

On skin:

no data available

Swallowed:

no data available

Inhaled:

no data available

Further information: The product is to be handled with the care necessary when dealing with chemicals.

12) Ecological information

General information:

Water hazard class 1 (self estimate): low water hazard

Not to be allowed to enter into groundwater, watercourses or canalization.

Aquatic toxicity:

We have no quantitative data on the ecological effects of this product.

Degradability:

The product is biodegradable.

Mobility in Soil

no data available

Bioaccumulative potential

No significant accumulation in organisms.

MATERIAL SAFETY DATA SHEET

13) Disposal considerations

Product:

Recommendation:

Waste disposal requirements vary among the federal states and local councils, so that inquiries should be made about the type of waste disposal at the local authority in question.

Soiled packaging:

Recommendation: Disposal according to official regulations.

14) Transport information

Land transport ADR/RID and GGVS/GGVE (crossborder/inland): -

ADR/RID-GGVS/E Class: -

Remarks: Not subject to transport regulations.

15) Regulatory information

Identification according to EEC guidelines:

According to EEC guidelines/GefStoffV, there are no specific identification requirements for the product.

National regulations:

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV)

Water hazard class: Water hazard class 1 (self estimate): low water hazard.

16) Other information

Information is based on our present knowledge; this shall not constitute a guarantee for any product features nor establish a contractual legal relationship.

Datasheet-issuing department: Product management

Contact person: Dr. Heumann

Date of latest revision: 06.12.2018

MATERIAL SAFETY DATA SHEET

1) Identification

Trade names:	Stable Glutamine for SILAC Media, unlabeled
Article No.:	288002100/288001000
Supplier :	Silantes GmbH Gollierstr. 70c D-80339 Munich Tel.: +49(0)89 500 941 0 Fax: +49(0)89 500 941 29 E-mail: info@silantes.com
Emergency phone number:	+49(0)89 500 941 0 Language: English Monday to Friday From 10:00 to 15:00 (CET)
Recommended use:	research only
Restrictions on use:	not for human use

The product does not meet the specifications of any of the hazard classes outlined by the Globally Harmonized System of Classification and Labelling of Chemicals.*

Therefore it is not necessary for this MSDS to be in compliance with the GHS.

*Canada: Schedule 2 of the Hazardous Product Act (R.S.C., 1985, c. H-3), Current to November 20, 2018 last amended on May 23, 2018

*United States of America: OSHA, 29 CFR 1910.1200(g) and Appendix A and B

2) Hazard identification

Hazard classification:

Not hazardous products within the meaning of Guideline 67/548/EEC

Label elements:

The product is exempt from the specific labeling requirements on the basis of the calculation procedures of the "General Classification Guidelines for Preparations in the EU" in the latest valid version.

Signal word: not required

MATERIAL SAFETY DATA SHEET

Other hazards:

not applicable

Additional information: Chemicals are by their nature hazardous substances. They are therefore only to be handled by appropriately trained personnel exercising the necessary diligence.

3) **Composition/Information on ingredients**

The product does not contain any hazardous material or substance.

Chemical name:

Stable Glutamine

Common name/Synonyms:

see above

Chemical characterization:

Stable Glutamine for SILAC Media, unlabeled

Content:

see above

4) **First-aid measures**

General instructions:

Remove clothing contaminated with product immediately.

Inhalation:

Inhale fresh air

Skin contact:

Wash off immediately with water

Contact with eyes:

Lift eyelids and rinse eyes for 10 minutes under running water. Seek medical attention if discomfort continues.

Ingestion:

Rinse out mouth and have affected person drink a glass of water. Do not induce vomiting. If discomfort continues, consult a medical doctor.

Symptoms:

One may feel slight discomfort after ingesting product.

No other symptoms known.

5) **Fire-fighting measures**

Product is neither self-igniting nor flammable.

Extinguish with:

Consider fire surroundings and choose fire-fighting measures accordingly.

water spray, foam, dry extinguishing powder, carbon dioxide (CO₂)

MATERIAL SAFETY DATA SHEET

Do not extinguish with:

water jet

Equipment for fire-fighting:

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

Hazards arising from fire:

none

6) Accidental release measures

Personal measures/protective equipment:

Wipe up with absorbent material (e.g. cloth, fleece).

Environmental measures:

Do not allow to enter the canalization/surface water/ground water systems

Cleansing/absorption material:

Absorbent material (e.g. cloth, fleece, paper towel).

Cleansing/absorption procedures:

Absorb mechanically, clean spill site after absorption (e.g. Ethanol)

7) Handling and storage

Handling:

Instructions for safe handling:

In accordance with laboratory guidelines of Employers' Accident Liability Insurance Association (BG-Chemie)

Instructions on fire and explosion protection:

No particular measures required.

Storage:

Requirements for storage areas and containers:

Store at 2-8°C

Incompatible materials:

Store separately from foodstuffs.

Further information on storage requirements:

Store in well sealed containers.

Storage category:

LGK 10-13 Other liquids and solids

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV): -

8) Exposure controls/Personal protection

Exposure:

Occupational exposure:

not applicable

Biological exposure:

not applicable

Engineering controls:

no measures must be taken

Ingredients with limit values that require monitoring at the workplace:

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

Personal protective equipment:

General protective and hygiene measures:

Keep separate from foodstuffs, beverages and animal feed.

Immediately remove soiled or saturated clothing.

Wash hands before breaks and after finishing work.

Avoid contact with the eyes and skin.

Protective gloves

Since the product is a preparation made up of several substances, the reliability of glove material cannot be predicted in advanced and must therefore be tested before being put into use.

We suggest Chemical protection gloves, which are tested according to EN 374.

Glove material

The choice of a suitable glove depends not only on the material, but also on other quality characteristics and varies from manufacturer to manufacturer.

We suggest NBR (Nitrile rubber)/thickness: >0,11 mm

Penetration time of the glove material

Information about the exact penetration time has to be obtained from the manufacturer and must be observed.

We suggest >480 minutes (permeation: level 6)

Eye protection

Tight-fitting protective goggles

9) Physical and chemical properties

Appearance:

Form:	liquid
Color:	transparent
Odour:	odourless
Odour threshold:	No data available

Melting/Freezing point: no data available

Boiling point/boiling range: no data available

Flash point: Not applicable

Evaporation rate: no data available

Flammability (solid; gas): Not applicable

Lower flammable/explosive limit: The product does not present an explosion hazard

Upper flammable/explosive limit: The product does not present an explosion hazard

Self-igniting: The product is not self-igniting

Vapour pressure: no data available

Vapour density: no data available

Relative density: no data available

Solubility: no data available

Partition coefficient-n-octanol/water: no data available

Auto-ignition temperature: no data available

Decomposition temperature: no data available

Viscosity: no data available

10) Stability and reactivity

Reactivity:

This product is not reactive under normal ambient conditions.

Chemical stability:

The product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions to be avoided:

above storage temperature specified in section 7

Substances to be avoided:

There is no additional information on incompatible materials.

Hazardous reactions:

There are no known hazardous reactions.

Hazardous decomposition products:

None

11) Toxicological information

Acute toxicity:

Classification relevant LD/LC50 values:

There is no quantitative data on the toxicity of this product.

On the skin:

Not to be classified as corrosive or irritant to skin.

On the eye:

Not to be classified as seriously damaging to the eye.

Not to be classified as eye irritant.

Inhalation:

Not to be classified as respiratory sensitizer.

Specific target organ toxicity:

Single exposure:

Not to be classified as specific target toxic on single exposure.

Repeated exposure:

Not to be classified as specific target toxic on repeated exposure.

Symptoms:

On skin:

no data available

Swallowed:

no data available

Inhaled:

no data available

Further information: The product is to be handled with the care necessary when dealing with chemicals.

12) Ecological information

General information:

Water hazard class 1 (self estimate): low water hazard

Not to be allowed to enter into groundwater, watercourses or canalization.

Aquatic toxicity:

We have no quantitative data on the ecological effects of this product.

Degradability:

The product is biodegradable.

Mobility in Soil

no data available

Bioaccumulative potential

No significant accumulation in organisms.

MATERIAL SAFETY DATA SHEET

13) Disposal considerations

Product:

Recommendation:

Waste disposal requirements vary among the federal states and local councils, so that inquiries should be made about the type of waste disposal at the local authority in question.

Soiled packaging:

Recommendation: Disposal according to official regulations.

14) Transport information

Land transport ADR/RID and GGVS/GGVE (crossborder/inland): -

ADR/RID-GGVS/E Class: -

Remarks: Not subject to transport regulations.

15) Regulatory information

Identification according to EEC guidelines:

According to EEC guidelines/GefStoffV, there are no specific identification requirements for the product.

National regulations:

Classification according to the Ordinance on Industrial Safety and Health (Betriebssicherheitsverordnung, BetrSichV)

Water hazard class: Water hazard class 1 (self estimate): low water hazard.

16) Other information

Information is based on our present knowledge; this shall not constitute a guarantee for any product features nor establish a contractual legal relationship.

Datasheet-issuing department: Product management

Contact person: Dr. Heumann

Date of latest revision: 06.12.2018