

Material Safety Data Sheet: geneMAG-plasmidDNA; MSDS 0779

1. Chemical Product and Company Identification

Product Name: geneMAG-plasmidDNA
Cat. No: 3501-10, 3501-50, 3501-250
Name of part component: SiMAG-plasmidDNA

Manufacturer: chemicell GmbH
Eresburgstrasse 22-23
12103 Berlin
Germany
Tel.: +49-30-2141481
Fax: +49-30-21913737

Chemical Formula: suspension of superparamagnetic silica particles

2. Composition / Information on Ingredients

Product Description

Magnetic core:	Magnetite (Fe ₃ O ₄)
Matrix:	Silica
Terminal groups:	Silanol
Suspension media:	water, 20% propan-2-ol
CAS No:	None

3. Hazard Identification



Xi Irritant

· Information concerning particular hazards for human and environment:

R 36 Irritating to eyes.

· Classification system:

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

HMIS Rating (scale 0-4): Health=1; Fire=0; Reaktivty=0; PPE=Goggles or Safety Glasses, Lab Coat, proper Gloves

Routes of Exposure: Inhalation=yes, Ingestion=yes, Skin=no

Accute Effects: Could cause eye and skin irritation. Exposure may cause irritation to mucous membranes and upper respiratory tract. May be harmful if swallowed.

Chronic Effects: Prolonged or repeated exposure to reagents may cause adverse reproductive effects. May cause fetal effects.

4. First Aid

In case of contact, immediately flush eyes or skin with water for at least 15 min while removing contaminated clothing and shoes. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, wash out mouth with water provided person is conscious. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Seek medical attention. Wash contaminated clothing before reuse.

5. Fire Fighting Measures

Negligible fire hazard when exposed to heat or flame.

Extinguishing Media: Water spray, carbon dioxide, dry chemical powder or appropriate foam.

Special Fire Fighting Procedures: May emit toxic fumes under fire conditions. Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6. Accidental Release Measures

Evacuate unnecessary personnel from area. Provide adequate general or local exhaust ventilation. If adequate ventilation is unavailable, wear self-contained breathing apparatus. Wear appropriate protective eyeglasses or chemical safety goggles. Wear appropriate protective gloves and protective clothing to prevent skin exposure, absorb on sand, vermiculite or chemical absorbing material and place in containers for disposal. Ventilate area and wash spill site after material pickup is complete.

7. Handling and Storage

Slight irritant. Keep container closed. Store in a cool dry place, +2° C to +8° C. Wear lab coat, gloves and eye protection and provide adequate ventilation. Avoid contact with skin, eyes and clothing. Ensure proximity to safety shower and eye bath. Wash thoroughly after handling. Avoid prolonged or repeated exposure.

8. Exposure Controls / Personal Protection

For routine operations wear lab coat, gloves and safety glasses to avoid contact with eyes, skin and clothing. Any protective lab wear's chemical resistance should be verified by supplier. Ensure proximity to eyewash and safety shower. Contaminated clothes should be changed immediately. Wash hands thoroughly after handling. Avoid prolonged or repeated inhalation and skin exposure.

9. Physical and Chemical Protection

Appearance:	brown
Solubility:	No
pH (+20 ° C):	NA
Fusing Temperature:	NA
Boiling Point:	NA
Flash Point:	NA
Explosion Limit:	NA
Density:	2.25 g/cm ³

10. Stability and Reactivity

Stable under normal temperatures and pressures.

Incompatibilities: Is incompatible with strong oxidizing agents, aluminum, acids, bases, calcium nitrate, pyridine, iodine, and sulfur trioxide.

Hazardous Combustion or Decomposition Products: Toxic fumes of carbon monoxide, carbon dioxide, nitrogen oxides, ammonia and chlorine may be released.

11. Toxicological Information

The material are may be harmful by inhalation or ingestion. Material may be irritating to mucous membranes and upper respiratory tract. The product may be harmful if swallowed. To the best of our knowledge, the chemical, physical, and toxicological properties of this formulation have not been thoroughly investigated. The product should be handled and treated with the usual caution of any unknown chemical.

12. Ecological Information

No data available. In the case of appropriate handling and use there is no expected ecological problem.

13. Disposal Information

Dissolve or mix with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations. Dispose of material packaging in accordance of federal, state and local environmental regulations. Any contaminated material or packaging should be treated the same as the material.

Notes to disposal: No uniform regulations are present for the disposal of chemicals in the member States of the European Union. In Germany disposal requirements should be handled differentiating "wastes for utilization" and "wastes for removal".

14. Transport Information

No data available.

15. Regulatory Information

None known.

16. Other Information

Revised Document Date
11/05/06

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1. Chemical Product and Company Identification

Product Name: geneMAG-plasmidDNA
Name of part component: Lysis Buffer

Manufacturer: chemicell GmbH
Eresburgstrasse 22-23
12103 Berlin
Germany
Tel.: +49-30-2141481
Fax: +49-30-21913737

2. Composition / Data on components

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

151-21-3	sodium dodecyl sulphate	1.0 - 2.0%
1310-73-2	sodium hydroxide	0.1 - 1.0%

3. Hazard description:



R: 22-36/38

Xi Irritant

- **Information concerning particular hazards for human and environment:**

R 36/38 Irritating to eyes and skin.

- **Classification system:**

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

4. First Aid

After inhalation: Supply fresh air and to be sure call for a doctor.

After skin contact: Immediately wash with water and soap and rinse thoroughly.

After eye contact:

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: Call for a doctor immediately.

5. Fire Fighting Measures

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Protective equipment: Do not inhale explosion gases or combustion gases.

6. Accidental Release Measures

Person-related safety precautions: Ensure adequate ventilation.

Measures for environmental protection:

Do not allow to enter sewers / surface or ground water.

Measures for cleaning/collecting:

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

7. Handling and Storage

Handling:

Information for safe handling: Keep receptacles tightly sealed.

Information about fire - and explosion protection:

No special measures required.

Storage:

Requirements to be met by storerooms and receptacles:

No special requirements.

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

Further information about storage conditions:

Keep receptacles tightly sealed.

8. Exposure Controls / Personal Protection

Additional information: No further data; see item 7.

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuff, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and skin.

Respiratory protection: Not required.

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.

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 Protection

Form:	fluid
Colour:	colourless
Solubility:	fully miscible
pH (+20 ° C):	13.2
Flash Point:	>55°C not applicable
Boiling Point:	100°C
Melting Point:	NA
Explosion Limit:	Product does not present an explosion hazard
Density:	0.991 g/cm ³

10. Stability and Reactivity

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

Dangerous reactions: Reacts with acids, alkalis and oxidizing agents.

Dangerous decomposition products: Danger of forming toxic pyrolysis products.

11. Toxicological information

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

12. Ecological Information

Water hazard class 1 (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.

13. Disposal Information

Product:

Recommendation:

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

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14. Transport Information

Land transport ADR/RID (cross-border):

ADR/RID class: 8 Corrosive substances

Danger code (Kemler): 80

UN-Number: 1824

Packaging group: III

Hazard Label: 8

Description of goods: 1824 Sodium hydroxide solution

Maritime transport IMDG:

IMDG class: 8
UN-Number: 1824
Label: 3
Packaging group: III
Marine pollutant: No
Proper shipping name: SODIUM HYDROXIDE SOLUTION

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA class: 8
UN/ID Number: 1824
Label: 8
Packaging group: III
Proper shipping name: SODIUM HYDROXIDE SOLUTION

15. Regulatory Information

Labelling according to EU guidelines: The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

Code letter and hazard designation of product:

Xi Irritant

Risk phrases:

36/38 Irritating to eyes and skin.

Safety phrases:

13 Keep away from food, drink and animal feedingstuffs.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36 Wear suitable protective clothing.

46 If swallowed, seek medical advice immediately and show this container or label.

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

16. Other Information

Revised Document Date
11/13/06

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1. Chemical Product and Company Identification

Product Name: geneMAG-plasmidDNA
Name of part component: Neutralization Buffer

Manufacturer: chemicell GmbH
Eresburgstrasse 22-23
12103 Berlin
Germany
Tel.: +49-30-2141481
Fax: +49-30-21913737

2. Composition / Data on components

- **Chemical characterization**
- **Description:** Liquid (Proprietary Compound Mixture)
- **Dangerous components:**

64-19-7	acetic acid	10 - 25%
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3. Hazard description:



R: 22-36/38

Xi Irritant

- **Information concerning particular hazards for human and environment:**

R 36/38 Irritating to eyes and skin.

- **Classification system:**

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

NFPA ratings (scale 0-4): Health=2; Fire=2; Reactivity=0

WHMIS-ratings (scale 0-4): Health=2; Fire=2; Reactivity=0

4. First Aid

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. Then consult a doctor.

After swallowing: Call for a doctor immediately.

5. Fire Fighting Measures

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Protective equipment: Do not inhale explosion gases or combustion gases.

6. Accidental Release Measures

Person-related safety precautions: Not required.

Measures for environmental protection:

Do not allow to enter sewers / surface or ground water.

Measures for cleaning/collecting:

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

7. Handling and Storage

Handling:

Information for safe handling: Ensure good ventilation/exhaustion at the workplace.

Information about fire - and explosion protection:

Keep ignition sources away – Do not smoke.

Storage:

Requirements to be met by storerooms and receptacles:

No special requirements.

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

Further information about storage conditions:

Keep receptacles tightly sealed.

8. Exposure Controls / Personal Protection

Additional information: No further data; see item 7.

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuff, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and skin.

Respiratory protection: Not required.

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.

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 Protection

Form:	fluid
Colour:	colourless
Solubility:	fully miscible
pH (+20 ° C):	5.5
Flash Point:	21 - 55°C
Boiling Point:	NA
Melting Point:	NA
Explosion Limit:	
Lower:	4.0 Vol %
Upper:	17.0 Vol %
Density:	1.123 g/cm ³

10. Stability and Reactivity

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

Dangerous reactions: Reacts with acids, alkalis and oxidizing agents.

Dangerous decomposition products: Danger of forming toxic pyrolysis products.

11. Toxicological information

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

12. Ecological Information

Water hazard class 1 (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.

13. Disposal Information

Product:

Recommendation:

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

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14. Transport Information

DOT regulations:

Hazard class: 8

Identification number: UN2790

Packing group: III

Proper shipping name: ACETIC ACID SOLUTION

Label: 8

Land transport ADR/RID (cross-border):

ADR/RID class: 8 Corrosive substances
Danger code (Kemler): 80
UN-Number: 2790
Packaging group: III
Description of goods: 2790 ACETIC ACID SOLUTION

Maritime transport IMDG:

IMDG class: 8
UN-Number: 2790
Label: 8
Packaging group: III
Marine pollutant: No
Proper shipping name: ACETIC ACID SOLUTION

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA class: 8
UN/ID Number: 2790
Label: 8
Packaging group: III
Proper shipping name: ACETIC ACID SOLUTION

15. Regulatory Information

Labelling according to EU guidelines: The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

Code letter and hazard designation of product:

Xi Irritant

Risk phrases:

36/38 Irritating to eyes and skin.

Safety phrases:

13 Keep away from food, drink and animal feedingstuffs.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36 Wear suitable protective clothing.

46 If swallowed, seek medical advice immediately and show this container or label.

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

16. Other Information

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1. Chemical Product and Company Identification

Product Name: geneMAG-plasmidDNA
Name of part component: RNase A

Manufacturer: chemicell GmbH
Eresburgstrasse 22-23
12103 Berlin
Germany
Tel.: +49-30-2141481
Fax: +49-30-21913737

2. Composition / Data on components

- **Chemical characterization**
- **Description:** Lyophilized
- **Dangerous components:**

9001-99-4	Nuclease, ribo-	2.5 - 10%
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3. Hazard description:



Xn Harmful

- **Information concerning particular hazards for human and environment:**

May cause sensitization by inhalation and skin contact.

- **Classification system:**

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

NFPA ratings (scale 0-4): Health=0; Fire=0; Reactivity=0

WHMIS-ratings (scale 0-4): Health=0; Fire=0; Reactivity=0

4. First Aid

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. Then consult a doctor.

After swallowing: Call for a doctor immediately.

5. Fire Fighting Measures

Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Protective equipment: Do not inhale explosion gases or combustion gases.

6. Accidental Release Measures

Person-related safety precautions: Not required.

Measures for environmental protection:

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

Measures for cleaning/collecting:

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

7. Handling and Storage

Handling:

Information for safe handling: Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.

Information about fire - and explosion protection:

No special measures required.

Storage:

Requirements to be met by storerooms and receptacles:

No special requirements.

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

Further information about storage conditions: None.

8. Exposure Controls / Personal Protection

Additional information: No further data; see item 7.

Personal protective equipment:

General protective and hygienic measures:

Keep away from foodstuff, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and skin.

Respiratory protection: Not required.

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.

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 Protection

Form:	lyophilized
Colour:	white
Solubility:	fully miscible
pH (+20 ° C):	NA
Flash Point:	NA
Boiling Point:	NA
Melting Point:	NA
Explosion Limit:	Product does not present an explosion hazard
Density:	NA

10. Stability and Reactivity

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

Dangerous reactions: Reacts with acids, alkalis and oxidizing agents.

Dangerous decomposition products:

No dangerous decomposition products known.

11. Toxicological information

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: Sensitization possible through inhalation.
Sensitization possible through skin contact.

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful, Irritant

12. Ecological Information

Water hazard class 1 (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.

13. Disposal Information

Product:

Recommendation:

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

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14. Transport Information

DOT regulations:

Hazard class: -

Land transport ADR/RID (cross-border):

ADR/RID class: -

Maritime transport IMDG:

IMDG class: -

Marine pollutant: No

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA class: -

15. Regulatory Information

Labelling according to EU guidelines: The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

Code letter and hazard designation of product:

Xn Harmful

Risk phrases:

May cause sensitization by inhalation and skin contact.

Safety phrases:

Do not breathe gas/fumes/vapour/spray.

Avoid contact with skin.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Wear suitable protective clothing and gloves.

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

16. Other Information

Revised Document Date

11/05/06

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