

MSDS Compilation – SPLIT RNA Extraction Kits

Lexogen GmbH

Campus Vienna Biocenter 5, 1030 Vienna, Austria
www.lexogen.com

This information is provided for purchasers of the **SPLIT RNA Extraction Kits**, represented by the following catalogue numbers: 008.03, 008.16, 008.48, 099.48

Tube	Reagent	MSDS
IB	Isolation Buffer	Yes
AB	Acidic Buffer	No ¹⁾
WB	Wash Buffer	No ¹⁾
EB	Elution Buffer	No ¹⁾
SB	Storage Buffer	No ¹⁾
BLB	Blood Lysis Buffer	Yes

Table 1: Overview of Lexogen MSDS for SPLIT RNA Extraction Kit

1) Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008. Not a hazardous substance or preparation according to EC directives 67/548/EEC or 1999/45/EC.

Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006

Version 1.0, revised 2014-07-09

Date of print 2015-03-19

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

1.1 Product Identifier:

Product Name	Isolation Buffer (IB)
Product Number	N/A
Kit name	SPLIT RNA Extraction Kit
Kit number	008.03, 008.16, 008.48
Brand	Lexogen
REACH No.	A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Relevant identified uses	Laboratory chemicals, FOR RESEARCH USE ONLY
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1.3 Details of the supplier of the Safety Data Sheet

Company	Lexogen GmbH Campus Vienna Biocenter 5 1030 Vienna Austria
Telephone	+43 1 345 1212
Fax	+43 1 345 1212-99
Email Address	support@lexogen.com

1.4 Emergency telephone number

Emergency Telephone	+43 1 406 43 43
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SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Acute toxicity, Inhalation (Category 2)

Serious eye damage (Category 1)

Skin corrosion (Category 1C)

Acute toxicity, Oral (Category 4)

Acute toxicity, Dermal (Category 4)

Chronic aquatic toxicity (Category 3)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

T, Xi Toxic, Irritant R23, R38, R41

Harmful by inhalation, in contact with skin and if swallowed. Contact with acids liberates very toxic gas. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Causes burns.

For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Pictogram :



Signal word

Danger

Hazard statement(s)

H302 + H312 + H332	Harmful if swallowed, in contact with skin or if inhaled.
H314	Causes severe skin burn and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H412	Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.

Supplemental Hazard information (EU)

EUH032	Contact with acids liberates very toxic gas.
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2.3 Other hazards none

SECTION 3. Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Guanidine thiocyanate		
CAS-No.: 593-84-0 EC-No.: 209-812-1 Index-No.: 615-030-00-5	Acute Tox. Oral 4; Acute Tox. Inh. 4; Acute Tox. Derm. 4; Skin corr. 1C; Chron. Aquat. Tox. 3; H302 + H312 + H332, H314, H412	20-80 %
Sodium N-lauroylsarcosinate		
CAS-No.: 137-16-6 EC-No.: 205-281-5	Acute Tox. 2; Skin Irrit. 2; Eye Dam. 1; H315, H318, H330	1-10 %

Hazardous ingredients according to Directive 1999/45/EC

Component	Classification	Concentration
Guanidine thiocyanate		
CAS-No.: 593-84-0 EC-No.: 209-812-1 Index-No.: 615-030-00-5	R20/21/22, R32, R34, R41, R52/53	20-80 %
Sodium N-lauroylsarcosinate		
CAS-No.: 137-16-6 EC-No.: 205-281-5	T, R23 - R38 - R41	1-10 %

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

SECTION 4. First aid measures

4.1 Description of first aid measures

General Advice

After exposure, consult physician. Show the physician this material safety data sheet.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NO_x), sulphur oxides

5.3 Advice for fire-fighters

Wear self-contained breathing apparatus for fire-fighting if necessary.

5.4 Further information

No data available.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Ensure all equipment is electrically grounded before beginning transfer operations. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool place. Keep container tightly closed in a dry and well-ventilated place. Do not store near acids.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

None included.

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dust are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Form: liquid, clear Colour: colourless
Odour	No data available
Odour threshold	No data available
pH	No data available
Melting/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Solubility(ies)	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

9.2 Other information

No data available.

SECTION 10. Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

No data available.

10.5 Incompatible materials

Strong acids, strong oxidizing agents, cyanides.

10.6 Hazardous decomposition products

No data available.

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Sodium N-lauroylsarcosinate

LD50 Oral – rat > 5000 mg/kg (OECD Test Guideline 401)

LD50 Inhalation – rat – 4h 0,05 – 0,5 mg/l

Guanidine thiocyanate

LD50 – oral – rat 593 mg/kg

LD50 – intraperitoneal – mouse 300 mg/kg

Skin corrosion/irritation

Sodium N-lauroylsarcosinate

Skin - rabbit

Result: Irritating to skin.

Guanidine thiocyanate

May be harmful if absorbed through skin. Causes skin burns.

Serious eye damage/eye irritation

Sodium N-lauroylsarcosinate

Eyes - rabbit

Result: Risk of serious damage to eyes. (OECD Test Guideline 405)

Guanidine thiocyanate

Causes eye burns.

Respiratory or skin sensitization

Sodium N-lauroylsarcosinate

Maximisation Test - guinea pig

Result: Does not cause skin sensitisation.

Germ cell mutagenicity

Sodium N-lauroylsarcosinate

Chromosome aberration test in vitro

Human lymphocytes

Result: negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

Sodium N-lauroylsarcosinate

no data available

Guanidine thiocyanate

May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Additional Information

Sodium N-lauroylsarcosinate

Repeated dose toxicity - rat - male and female - Oral - No observed adverse effect level - 30 mg/kg

RTECS: Not available

Cough, wheezing, respiratory difficulties, Diarrhoea, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. Ecological information

12.1 Toxicity

Toxicity to fish semi-static test EC50 - Danio rerio (zebra fish) - 107 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

Immobilization LC50 - Daphnia magna (Water flea) - 29,7 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae static test EC50 - Desmodesmus subspicatus (green algae) - 79 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria Respiration inhibition NOEC - Sludge Treatment - 100 mg/l - 3 h (OECD Test Guideline 209)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d
Result: 82 % - Readily biodegradable.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

No data available.

SECTION 13. Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused products.

SECTION 14. Transport information

14.1 UN-Number

ADR/RID: 2810

IMDG: 2810

IATA: 2810

14.2 UN proper shipping name

ADR/RID: Toxic, liquids, organic, n.o.s. (Sodium N-lauroylsarcosinate, Guanidine thiocyanate)

IMDG: Toxic, liquids, organic, n.o.s. (Sodium N-lauroylsarcosinate, Guanidine thiocyanate)

IATA: Toxic, liquids, organic, n.o.s. (Sodium N-lauroylsarcosinate, Guanidine thiocyanate)

14.3 Transport hazard classes

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

14.4 Packing group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: no

IMDG: Marine pollutant: no

IATA: no

14.6 Special precautions for users

No data available.

SECTION 15. Regulatory information

This material safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

No data available.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16. Other information

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox. Oral	Acute toxicity, Oral
Acute Tox. Inh.	Acute toxicity, Inhalation
Acute Tox. Derm.	Acute toxicity, Dermal
Eye Dam.	Serious eye damage
Skin Irrit.	Skin irritation
Skin Corr.	Skin corrosion
Chron. Aquat. Tox.	Chronic aquatic toxicity
H302 + H312 + H332	Harmful if swallowed, in contact with skin or if inhaled.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.

H318	Causes serious eye damage.
H330	Fatal if inhaled.
H412	Harmful to aquatic life with long lasting effects.

Full text of R-phrases referred to under sections 2 and 3.

T	Toxic
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R23	Toxic by inhalation.
R32	Contact with acids liberates very toxic gas
R34	Causes burns
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regards to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Lexogen shall not be held liable for any damage resulting from handling or from contact with the above product. Please see also our terms and conditions on our website www.lexogen.com Copyright (2014): Lexogen GmbH. Copies may be made for internal use only.

Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006

Version 1.0, revised 2019-08-03

Date of print 2019-08-03

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

1.1 Product Identifier:

Product Name	Blood Lysis Buffer (BLB)
Product Number	N/A
Kit name	SPLIT RNA Extraction Kit
Kit number	099.48
Brand	Lexogen
REACH No.	A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Relevant identified uses	Laboratory chemicals, FOR RESEARCH USE ONLY
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1.3 Details of the supplier of the Safety Data Sheet

Company	Lexogen GmbH Campus Vienna Biocenter 5 1030 Vienna Austria
Telephone	+43 1 345 1212
Fax	+43 1 345 1212-99
Email Address	support@lexogen.com

1.4 Emergency telephone number

Emergency Telephone	+43 1 406 43 43
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SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Acute toxicity, Oral (Category 4), H302

Eye irritation (Category 2A), H319

Acute aquatic toxicity (Category 2), H411

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Pictogram :



Signal word

Warning

Hazard statement(s)

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P273 Avoid release to the environment.

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

Supplemental Hazard Statements none

2.3 Other hazards none

SECTION 3. Composition/information on ingredients**3.2 Mixtures****Hazardous ingredients according to Regulation (EC) No 1272/2008**

Component	Classification	Concentration
Ammonium Chloride		
CAS-No.: 12125-02-9 EC-No.: 235-186-4 Index-No.: 017-014-00-8	Acute Tox. 4; Eye Irrit. 2; Aquatic Chronic 2; H302, H319, H411	0,01-50 %
Water		
CAS-No.: 7732-18-5 EC-No.: 231-791-2		50-99.99 %

For the full text of the H-Statements mentioned in this Section, see Section 16

SECTION 4. First aid measures**4.1 Description of first aid measures****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5. Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Nitrogen oxides (NO_x), Hydrogen chloride gas

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Hygroscopic.

Storage class (TRGS 510): Non Combustible Solids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)
data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de,
test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industria situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle r (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9. Physical and chemical properties

Appearance: Clear liquid
Odor: Odorless
Odor Threshold: Not determined
pH: 5.5 (1% aq.sol.); 5.1 (3% aq.sol.); 5.0 (10% aq.sol.)
% Volatiles by volume @ 21C (70F): 0
Melting Point: 338C (640F) Sublimes – for Ammonium Chloride
Boiling Point / Boiling Range: 520C (968F) – for Ammonium Chloride
Flash Point: Not applicable
Evaporation Rate (BuAc=1): No information found
Flammability: Not applicable
Upper / Lower Flammability or Explosive Limits: Not applicable
Vapor Pressure (mm Hg): 1.0 @ 160C (320F) – for Ammonium Chloride
Vapor Density (Air=1): 1.9 – for Ammonium Chloride
Relative Density: No data available
Solubility: 29.7g/100g water @ 0C (32F) – for Ammonium Chloride
Partition Coefficient: n-octanol / water: No data available
Auto-ignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available

SECTION 10. Stability and reactivity

Reactivity and / or Chemical Stability: Stable under ordinary conditions of use and storage.

Possibility of Hazardous Reactions and Conditions to Avoid: Heat, moisture, incompatibles.

Incompatible Materials: Concentrated acids, strong bases, silver salts, Potassium Chlorate, Ammonium Nitrate, Bromine Trifluoride and Iodine Heptafluoride. Ammonium Chloride reacts explosively with Potassium Chlorate or Bromine Trifluoride, and violently with Bromide Pentafluoride, Ammonium compounds, nitrates, and Iodine Heptafluoride. Explosive Nitrogen Trichloride may result from reaction of Ammonium Chloride and Hydrogen Cyanide.

Hazardous decomposition products

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions. - Nitrogen oxides (NO_x), Hydrogen chloride gas

In the event of fire: see section 5

SECTION 11. Toxicological information

Emergency Overview: WARNING! CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. HARMFUL IF SWALLOWED OR INHALED.

Potential Health Effects:

If inhaled or swallowed, this compound can cause fluoride poisoning. Early symptoms include nausea, vomiting, diarrhea, and weakness. Later effects include central nervous system effects, cardiovascular effects and death.

Inhalation: Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.

Ingestion: Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.

Skin Contact: Causes irritation to skin. Symptoms include redness, itching, and pain.

Eye Contact: Causes irritation, redness, and pain.

Chronic Exposure: No information found.

Aggravation of Pre-existing Conditions: No information found.

Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System:) No data available.

Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System:) No data available.

Numerical Measures of Toxicity: Cancer Lists: NTP Carcinogen

Ingredient	Known	Anticipated	IARC Category
Ammonium Chloride (12125-02-9)	No	No	None
Water (7732-18-5)	No	No	None

Acute Toxicity:

Ammonium Chloride:

Oral rat LD50 : 1650 mg/kg

Investigated as a mutagen.

SECTION 12. Ecological information

Ecotoxicity: Toxic to aquatic life.

Persistence and Degradability: Expected to be readily biodegradable.

Bioaccumulative Potential: This material is not expected to significantly bioaccumulate.

Mobility in Soil: Considerable mobility.

Other adverse effects: Toxic to aquatic life with long lasting effects

