



# Material Safety Data Sheet

Version 1, 03/15/18

## 1. PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Product identifiers

Product name: **X-Lyz™ Reagent A**

Product Number: IC286091

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

Identified uses: Laboratory chemicals, research in laboratory

### 1.3 Details of the supplier of the safety data sheet

Irvine Chemistry Lab  
[info@irvinechemistrv.com](mailto:info@irvinechemistrv.com)  
[www.irvinechemistrv.com](http://www.irvinechemistrv.com)

3303 E. Miraloma Ave, Ste 186  
Anaheim, CA 92806 USA  
Tel: (714) 855-4622  
Fax: (714) 276-2202

### 1.4 Emergency telephone number

Emergency Phone #: (714) 855-4622

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Corrosive to metals (Category 1), H290

Skin corrosion (Category 1A), H314

Serious eye damage (Category 1), H318

Reproductive toxicity (Category 2), H361

Acute aquatic toxicity (Category 3), H402

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

### 2.2 GHS Label elements, including precautionary statements Pictogram



Signal word Danger

Hazard statement(s)

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H402 Harmful to aquatic life.

H361 Suspected of damaging fertility or the unborn child.

Precautionary statement(s)

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

P234 Keep only in original container.

P260 Do not breathe dust or mist.

P264 Wash skin thoroughly after handling.

P273 Avoid release to the environment.

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

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water/shower.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P363 Wash contaminated clothing before reuse.

P390 Absorb spillage to prevent material damage.

P405 Store locked up.

P406 Store in corrosive resistant stainless steel container with a resistant inner liner.

P501 Dispose of contents/ container to an approved waste disposal plant.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

Synonyms: none

#### Hazardous components

Components	ID	Concentration
Boric acid	CAS#: 10043-35-3 EC #: 233-139-2	1-5 %
Sodium hydroxide	CAS-No.: 1310-73-2 EC-No.: 215-185-5	1.5-2%

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

## 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. Move out of dangerous area.

#### 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. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

#### 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

**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**

No data available

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information**

No data available

**6. ACCIDENTAL RELEASE MEASURES**

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

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

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**

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

**7. HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

For precautions see section 2.2.

**7.2 Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage at room temperature

**7.3 Specific end use(s)**

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

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Control parameters**

**Components with workplace control parameters**

Component	CAS-No.	Value	Control parameters	Basis
Boric acid	10043-35-3	TWA	2.000000mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation; Not classifiable as a human carcinogen varies		
		STEL	6.000000mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation; Not classifiable as a human carcinogen varies		
		TWA	2.000000mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation; Not classifiable as a human carcinogen varies		
		TWA	2.000000mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation; Not classifiable as a human carcinogen varies		
		STEL	6.000000mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation; Not classifiable as a human carcinogen varies		
		STEL	6.000000mg/m3	USA. ACGIH Threshold Limit Values(TLV)
		Upper Respiratory Tract irritation; Not classifiable as a human carcinogen varies		
		TWA	2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation; Not classifiable as a human carcinogen varies		
		STEL	6 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation; Not classifiable as a human carcinogen varies		

Component	CAS-No.	Value	Control parameters	Basis
Sodium hydroxide	1310-73-2	TWA	2.000000mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		C	2.000000mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation; Eye irritation; Skin irritation		
		C	2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Upper Respiratory Tract irritation; Eye irritation; Skin irritation		
		C	2.000000mg/m3	USA. NIOSH Recommended; Exposure Limits
		C	2 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

**Derived No Effect Level (DNEL)**

	Application Area	Exposure routes	Health effect	Value
	Workers	Inhalation	Long-term local effects	1 mg/m3
	Consumers	Inhalation	Long-term local effects	1 mg/m3

## 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

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.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 480 min

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- a) Appearance Form: liquid
- b) Odor No data available
- c) Odor Threshold No data available
- d) pH ~10.5
- e) Melting point/freezing point  
No data available
- f) Initial boiling point and boiling range  
No data available
- g) Flash point No data available
- h) Evaporation rate No data available
- i) Flammability (solid, gas) No data available
- j) Upper/lower flammability or explosive limits  
No data available
- k) Vapor pressure No data available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

No data available

#### Skin corrosion/irritation

Causes severe burns.

#### Serious eye damage/eye irritation

Corrosive

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### 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.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls.

If the respirator is the sole means of protection, use a full-face supplied air respirator. 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.

- l) Vapor density No data available
- m) Relative density No data available
- n) Water solubility No data available
- o) Partition coefficient: noctanol/water  
No data available
- p) Auto-ignition temperature  
No data available
- q) Decomposition temperature  
No data available
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available

### 9.2 Other safety information

No data available

## 10.5 Incompatible materials

Strong oxidizing agents

## 10.6 Hazardous decomposition products

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions.

- Borane/boron oxides, Sodium oxides

In the event of fire: see section 5

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Reproductive toxicity

No data available

No data available

### Specific target organ toxicity - single exposure

No data available

### Specific target organ toxicity - repeated exposure

No data available

### Aspiration hazard

No data available

### Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

Liver - Irregularities - Based on Human Evidence (Boric acid)

Stomach - Irregularities - Based on Human Evidence (Methanol)

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

No data available

### 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

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. 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 product.

## 14. TRANSPORT INFORMATION

### DOT (US)

UN number: 1823 Class: 8 Packing group: II

Proper shipping name: sodium hydroxide, solution

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

### IMDG

UN number: 1823 Class: 8 Packing group: II EMS-No: F-A, S-B

Proper shipping name: SODIUM HYDROXIDE SOLUTION

### IATA

UN number: 1823 Class: 8 Packing group: II

Proper shipping name: Sodium hydroxide solution

## 15. REGULATORY INFORMATION

### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

#### Massachusetts Right To Know Components

Sodium hydroxide

CAS-No.

1310-73-2

Revision Date

2007-03-01

#### Pennsylvania Right To Know Components

Sodium hydroxide

CAS-No.

1310-73-2

Revision Date

2007-03-01

Water

CAS-No.

7732-18-5

Revision Date

#### New Jersey Right To Know Components

Sodium hydroxide

CAS-No.

1310-73-2

Revision Date

2007-03-01

Water

CAS-No.

7732-18-5

Revision Date

Boric acid

CAS-No.10043-35-3

Revision Date

2009-07-17

#### California Prop. 65 Components

WARNING: This product does not contain a chemical known to the State of California to cause birth defects or other reproductive harm.

## 16. OTHER INFORMATION

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

Acute toxicity

Aquatic Acute aquatic toxicity

Aquatic Chronic aquatic toxicity

Eye Dam. Serious eye damage

H290 May be corrosive to metals.

H301 Toxic if swallowed.

H301 + H311 +H331

Toxic if swallowed, in contact with skin or if inhaled

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H361 Suspected of damaging fertility or the unborn child.

H370 Causes damage to organs.

H401 Toxic to aquatic life.

H402 Harmful to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Met. Corr. Corrosive to metals

Repr. Reproductive toxicity

Skin Corr. Skin corrosion

Skin Sens. Skin sensitisation

STOT SE Specific target organ toxicity - single exposure

#### HMIS Rating

Health hazard: 3

Chronic Health Hazard: \*

Flammability: 0

Physical Hazard 0

#### NFPA Rating

Health hazard: 3

Fire Hazard: 0

Reactivity Hazard: 0

### 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 regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Irvine Chemistry Lab shall not be held liable for any damage resulting from handling or from contact with the above product.

## 1. PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Product identifiers

Product name: **X-Lyz™ Reagent B**

Product Number: IC286092

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

Identified uses: Laboratory chemicals, research in laboratory

### 1.3 Details of the supplier of the safety data sheet

Irvine Chemistry Lab  
info@irvinechemistry.com  
www.irvinechemistry.com

3303 E. Miraloma Ave, Ste 186  
Anaheim, CA 92806 USA  
Tel: (714) 855-4622  
Fax: (714) 276-2202

### 1.4 Emergency telephone number

Emergency Phone #: (714) 855-4622

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Flammable liquids (Category 4), H227

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Dermal (Category 4), H312

Skin corrosion (Category 1B), H314

Serious eye damage (Category 1), H318

Specific target organ toxicity - single exposure (Category 3),

Respiratory system, H335

Reproductive toxicity (Category 1B), H360

Acute aquatic toxicity (Category 1), H400

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

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)

H227 Combustible liquid.

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H312 + H332 Harmful in contact with skin or if inhaled

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

H360 May damage fertility or the unborn child.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P260 Do not breathe dust or mist.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/ eye protection/ face protection.

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P391 Collect spillage.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Rapidly absorbed through skin.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

Synonyms: no other names

#### Hazardous components

Component Classification Concentration

Component	ID	Concentration
Reagent B	Organic compounds	80-98%

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

## 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. Move out of dangerous area.

#### 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.

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

#### 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

#### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

## 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

No data available

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

No data available

## 6. ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. 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

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Keep away from sources of ignition – No smoking. Take measures to prevent the buildup of electrostatic charge. For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Recommended Storage Temperature: ambient temperature. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Packaged under inert gas. Storage class (TRGS 510): Combustible liquids.

### 7.3 Specific end use(s)

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

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Not available

#### Biological occupational exposure limits

Not available

#### Derived No Effect Level (DNEL)

Not available

#### Predicted No Effect Concentration (PNEC)

Not available

Hazardous components without workplace 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

Tightly fitting safety goggles. Face shield (8-inch minimum). 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. Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

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.

##### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls.

If the respirator is the sole means of protection, use a full-face supplied air respirator. 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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- a) Appearance Form: liquid, clear  
Color: light yellow
- b) Odor No data available
- c) Odor Threshold No data available
- d) pH No data available
- e) Melting point/freezing point  
No data available
- f) Initial boiling point and boiling range  
No data available
- g) Flash point No data available
- h) Evaporation rate No data available
- i) Flammability (solid, gas) No data available
- j) Upper/lower flammability or explosive limits  
No data available

- k) Vapor pressure explosive limits  
No data available
  - l) Vapor density No data available
  - m) Relative density No data available
  - n) Water solubility soluble
  - o) Partition coefficient: octanol/water  
No data available
  - p) Auto-ignition temperature  
No data available
  - q) Decomposition temperature  
No data available
  - r) Viscosity No data available
  - s) Explosive properties No data available
  - t) Oxidizing properties No data available
- ### 9.2 Other safety information
- No data available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Strong acids, Strong bases, Strong oxidizing agents

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions.

- Carbon oxides

Other decomposition products - No data available

In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

Inhalation: No data available

LD50 Dermal - Rabbit - > 3,000 mg/kg

No data available

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

No data available

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### 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.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

#### Reproductive toxicity

No data available

No data available

#### Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available

#### Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

No data available

### 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

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### DOT (US)

NA-Number: 1993 Class: NONE Packing group: III

Proper shipping name: X-Lyz™ Reagent B

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

### IMDG

Not dangerous goods

### IATA

Not dangerous goods

## 15. REGULATORY INFORMATION

### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

### California Prop. 65 Components

WARNING: This product may contain a chemical known to the State of California to cause birth defects or other reproductive harm.

## 16. OTHER INFORMATION

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

Acute toxicity

Aquatic Acute aquatic toxicity

Aquatic Chronic aquatic toxicity

Flam. Liq. Flammable liquids

Eye Dam. Serious eye damage

H227 Combustible liquid.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H312 + H332 Harmful in contact with skin or if inhaled

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H401 Toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Skin irritation

**HMIS Rating**

Health hazard: 2

Chronic Health Hazard: \*

Flammability: 2

Physical Hazard 0

**NFPA Rating**

Health hazard: 2

Fire Hazard: 2

Reactivity Hazard: 0

### 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 regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Irvine Chemistry Lab shall not be held liable for any damage resulting from handling or from contact with the above product.



## 1. PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Product identifiers

Product name: **L-Norvaline**

Product Number: IC286098

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

Identified uses: Laboratory chemicals, research in laboratory

### 1.3 Details of the supplier of the safety data sheet

*Irvine Chemistry Lab*

[info@irvinechemistry.com](mailto:info@irvinechemistry.com)

[www.irvinechemistry.com](http://www.irvinechemistry.com)

3303 E. Miraloma Ave, Ste 186

Anaheim, CA 92806 USA

Tel: (714) 855-4622

Fax: (714) 276-2202

### 1.4 Emergency telephone number

Emergency Phone #: (714) 855-4622

## 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Composition: 50µmol Novaline/mL in 10mM HCl

Synonyms : (S)(+)-2-Aminopentanoic acid (S)-2-Aminovaleric acid

Formula : C<sub>5</sub>H<sub>11</sub>NO<sub>2</sub>

Molecular Weight : 117.15 g/mol

CAS-No. : 6600-40-4

EC-No. : 229-543-3

No ingredients are hazardous according to OSHA criteria.

No components need to be disclosed according to the applicable regulations.

## 4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

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

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

## 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<sub>x</sub>)

5.3 Advice for firefighters

Wear self contained breathing apparatus for firefighting if necessary.

5.4 Further information

no data available

## 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapours, mist or gas. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

## 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end use(s)

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

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection

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.

#### Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

a) Appearance Form: crystalline

Colour: colourless

b) Odour no data available

c) Odour Threshold no data available

d) pH no data available

e) Melting point/freezing point

Melting point/range: > 300 °C (> 572 °F)

f) Initial boiling point and boiling range

no data available

g) Flash point no data available

h) Evaporation rate no data available

i) Flammability (solid, gas) no data available

j) Upper/lower flammability or explosive limits

no data available

k) Vapour pressure no data available

l) Vapour density no data available

m) Relative density no data available

n) Water solubility no data available

o) Partition coefficient: octanol/water

no data available

p) Auto-ignition temperature

no data available

q) Decomposition temperature

no data available

r) Viscosity no data available

s) Explosive properties no data available

t) Oxidizing properties no data available

9.2 Other safety information

no data available

### 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

no data available

#### 10.2 Chemical stability

Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions

no data available

#### 10.4 Conditions to avoid

no data available

#### 10.5 Incompatible materials

Strong oxidizing agents

#### 10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

### 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

Acute toxicity

no data available

Inhalation: no data available

Dermal: no data available

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available  
no data available  
Specific target organ toxicity - single exposure  
no data available  
Specific target organ toxicity - repeated exposure  
no data available  
Aspiration hazard  
no data available

Additional Information  
RTECS: Not available

## **12. ECOLOGICAL INFORMATION**

12.1 Toxicity  
no data available  
12.2 Persistence and degradability  
no data available  
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

## **13. DISPOSAL CONSIDERATIONS**

13.1 Waste treatment methods  
Product  
Offer surplus and non-recyclable solutions to a licensed disposal company.  
Contaminated packaging  
Dispose of as unused product.

## **14. TRANSPORT INFORMATION**

DOT (US)  
Not dangerous goods  
IMDG  
Not dangerous goods  
IATA  
Not dangerous goods

## **15. REGULATORY INFORMATION**

SARA 302 Components  
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.  
SARA 313 Components  
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.  
SARA 311/312 Hazards  
No SARA Hazards  
Massachusetts Right To Know Components  
Hydrochloric acid CAS-No. 7647-01-0 Revision Date 2013-02-08  
Pennsylvania Right To Know Components  
Norvaline CAS-No. 6600-40-4 Revision Date  
Water CAS-No. 7732-18-5 Revision Date  
Hydrochloric acid CAS-No. 7647-01-0 Revision Date 2013-02-08  
New Jersey Right To Know Components  
Norvaline CAS-No. 6600-40-4 Revision Date  
Water CAS-No. 7732-18-5 Revision Date  
California Prop. 65 Components  
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## **16. OTHER INFORMATION**

HMIS Rating  
Health hazard: 0  
Chronic Health Hazard:  
Flammability: 0  
Physical Hazard 0  
NFPA Rating  
Health hazard: 0  
Fire Hazard: 0  
Reactivity Hazard: 0

### **Further information**

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