



**LEONID CHEMICALS PVT. LTD.,
BANGALORE**

An ISO-9001:2008 Certified Company

Quality Assurance Department

(CODE) DOCUMENT : WI

(CODE) SECTION : WI/SM

(DATE) : 01.04.2011



Issue : 02

Rev.: 00

Title: MATERIAL SAFETY DATA SHEET (MSDS): ALLYL AMINE

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SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: Allyl Amine

Catalog Numbers: A005

Synonyms: 3-Amino-1-propene

CAS-No. : 107-11-9

Company Information:

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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]

Flammable liquids (Category 2)

Acute toxicity, Oral (Category 3)

Acute toxicity, Inhalation (Category 3)

Acute toxicity, Dermal (Category 1)

Chronic aquatic toxicity (Category 2)

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

Highly flammable. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Toxic by inhalation, in contact with skin and if swallowed.

2.2 Label elements

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

Signal word Danger

Hazard statement(s)

H225 Highly flammable liquid and vapour.

H301 Toxic if swallowed.

H310 Fatal in contact with skin.

H331 Toxic if inhaled.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)



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- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ protective clothing.
- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
- P302 + P350 IF ON SKIN: Gently wash with plenty of soap and water.

Supplemental Hazard

Statements none

According to European Directive 67/548/EEC as amended.

Hazard symbol(s)

R-phrase(s)

- R11 Highly flammable.
- R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)

- S 9 Keep container in a well-ventilated place.
- S16 Keep away from sources of ignition - No smoking.
- S24/25 Avoid contact with skin and eyes.
- S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

2.3 Other hazards

Lachrymator.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : 2-Propen-1-ylamine
3-Amino-1-propene

Formula : C3H7N

Molecular Weight : 57,09 g/mol

Component	Concentration
Allylamine	
CAS-No.	107-11-9
EC-No.	203-463-9
Index-No.	612-046-00-4



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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. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

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

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

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 (NOx)

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures



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6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

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

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

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 inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. 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. Store under inert gas.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

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



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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.

Splash protection

Material: butyl-rubber

Minimum layer thickness: 0,3 mm

Break through time: > 30 min

Material tested: Butoject

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 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, Flame retardant antistatic protective clothing, 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 multi-purpose combination (US) or type AXBEK (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).

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- a) Appearance Form : clear, liquid
Colour : colourless



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- b) Odour : no data available
- c) Odour Threshold : no data available
- d) pH : no data available
- e) Melting point/freezing point : Melting point/range: -88 °C - lit.
- f) Initial boiling point and boiling range : 53 °C - lit.
- g) Flash point : -29 °C - closed cup
- h) Evaporation rate : no data available
- i) Flammability (solid, gas) : no data available
- j) Upper/lower flammability or explosive limits : Upper explosion limit: 22 %(V)
Lower explosion limit: 2,2 %(V)
- k) Vapour pressure : 1.127,6 hPa at 55 °C
282,0 hPa at 20 °C
- l) Vapour density : 1,97 - (Air = 1.0)
- m) Relative density : 0,761 g/cm³ at 25 °C
- 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

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

Heat, flames and sparks. Extremes of temperature and direct sunlight.



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10.5 Incompatible materials

acids, Oxidizing agents, Chlorine, Hypochlorites, Halogens, Chemically active metals

10.6 Hazardous decomposition products

Other decomposition products - no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - mouse - 57 mg/kg

LD50 Oral - rat - 102 mg/kg

LC50 Inhalation - rat - 8 h - 177 ppm

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Olfaction:Other changes. Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation. Lungs, Thorax, or Respiration:Dyspnea.

LD50 Dermal - rabbit - 35 mg/kg

Remarks: Skin irritation Lungs, Thorax, or Respiration:Chronic pulmonary edema.

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

Genotoxicity in vivo - rat - Oral

Cytogenetic analysis

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



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Aspiration hazard

no data available

Potential health effects

Inhalation Toxic if inhaled. May cause respiratory tract irritation.

Ingestion Toxic if swallowed.

Skin May be fatal if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

Additional Information

RTECS: BA5425000

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish LC50 - Carassius auratus (goldfish) - 6 mg/l - 96,0 h

Toxicity to daphnia and other aquatic invertebrates

LC50 - Daphnia magna (Water flea) - 30 mg/l - 48 h

Toxicity to algae EC50 - Pseudokirchneriella subcapitata (green algae) - 25 mg/l - 72 h

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

no data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging



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Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 2334 IMDG: 2334 IATA: 2334

14.2 UN proper shipping name

ADR/RID: ALLYLAMINE

IMDG: ALLYLAMINE

IATA: Allylamine

Passenger Aircraft: Not permitted for transport

Cargo Aircraft: Not permitted for transport

14.3 Transport hazard class(es)

ADR/RID: 6.1 (3) IMDG: 6.1 (3) IATA: 6.1 (3)

14.4 Packaging group

ADR/RID: I IMDG: I IATA: -

14.5 Environmental hazards

ADR/RID: yes IMDG Marine Pollutant: yes IATA: no

14.6 Special precautions for user

no data available

SECTION 15: Regulatory information

This 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

no data available

SECTION 16 - ADDITIONAL INFORMATION

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Leonid



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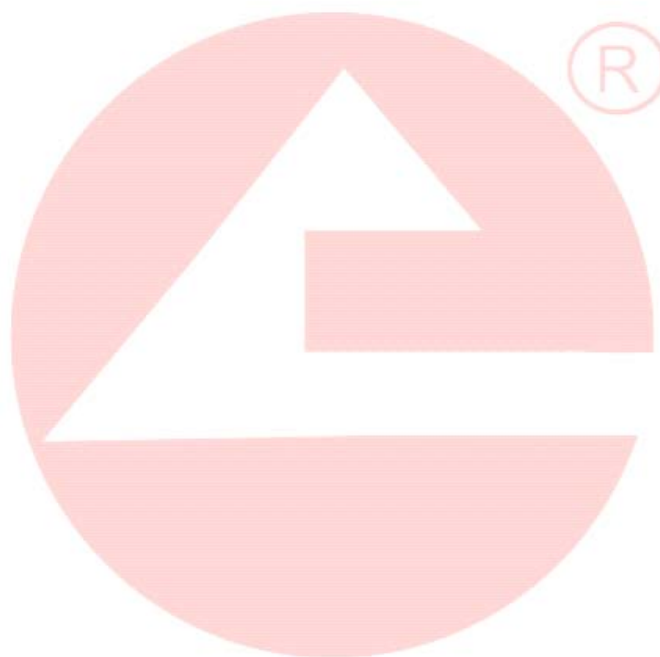
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