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

1.1 Product identifier

Trade name **Allylamine**

Stock number: L07162
CAS Number: 107-11-9
EC number: 203-463-9

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

Identified use: SU24  Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Thermo Fisher (Kandel) GmbH
Zegelslnstr. 7b
76185 Karlsruhe / Germany

Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com

www.alfa.com

Informing department: Product safety Tel + +049 (0) 7275 988687-0

1.4 Emergency telephone number:

Carechem 24: +44 (o) 1235 239 670 (Multi-language emergency number)
Poison Information Center Mainz
www.giftinfo.uni-mainz.de  Telephone: +49(0)6131/19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**

- GHS02 flame
- Flam. Liq. 2 H225 Highly flammable liquid and vapour.

- GHS06 skull and crossbones
- Acute Tox. 3 H301 Toxic if swallowed.
- Acute Tox. 3 H311 Toxic in contact with skin.
- Acute Tox. 3 H331 Toxic if inhaled.

- GHS09 environment
- Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

Other hazards that do not result in classification No information known.

2.2 Label elements

**Labelling according to Regulation (EC) No 1272/2008** The substance is classified and labelled according to the CLP regulation.

**Hazard pictograms**

- GHS02 GHS06 GHS09

**Signal word** Danger

**Hazard statements**

H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H331 Toxic if inhaled.
H411 Toxic to aquatic life with long lasting effects.

**Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P231 Avoid breathing dust/fume/gas/mist/vapours/spray.
P333+P343+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P361 Remove/Take off immediately all contaminated clothing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances

**CAS# Designation:**

107-11-9 Allylamine

**Identification number(s):**

EC number: 203-463-9
Index number: 612-046-00-4

SECTION 4: First aid measures

4.1 Description of first aid measures

**General information**

Instantly remove any clothing soiled by the product.
Remove breathing apparatus only after soiled clothing has been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.

**After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
Seek immediate medical advice.

(Contd. on page 2)
After skin contact
Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

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

After swallowing
Do not induce vomiting; instantly call for medical help.

4.2 Most important symptoms and effects, both acute and delayed
Toxic in contact with skin.
Toxic if inhaled.
Toxic if swallowed.

4.3 Indication of any immediate medical attention and special treatment needed
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents: CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)

5.3 Advice for firefighters
Protective equipment:
Wear self-contained breathing apparatus.
Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.

6.2 Environmental precautions:
Do not allow product to reach sewage system or water bodies.

6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.

6.4 Reference to other sections
See section 7 for information on safe handling.
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Handle under dry protective gas.
Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.
Open and handle container with care.

7.2 Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and containers:
Store away from air.
Store away from oxidising agents.

7.3 Specific end use(s)
No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters
Components with critical values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Additional information:
No data

8.2 Exposure controls
Personal protective equipment

General protective and hygienic measures:
The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Immediately remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Keep protective clothing separately.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.

Recommended filter device for short term use:
Use a respirator with multi-purpose combination (US) or type AXBEK (EN 14387) as a backup to engineering controls. Risk assessment should be performed to determine if any purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards such as NIOSH (USA) or CEN (EU).

Protection of hands:
Check protective gloves prior to each use for their proper condition.
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.

Material of gloves: Butyl rubber, BR
Penetration time of glove material (in minutes) 78
Glove thickness 0.3 mm

Eye protection:
Safety glasses

Face protection
Trade name: Allylamine

Body protection: Protective work clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information
Appearance: Liquid
Smell: Ammonia-like
Odour threshold: Not determined.

pH-value: Not determined.

Change in condition
Melting point/Melting range: -88 °C
Boiling point/Boiling range: 53-54 °C
Sublimation temperature / start: Not determined

Flash point: -29 °C
Inflammability (solid, gaseous): Not determined.
Ignition temperature: 370 °C
Decomposition temperature: Not determined
Self-inflammability: Not determined.

Danger of explosion: Product is not explosive. However, formation of explosive air/steam mixtures is possible.

Critical values for explosion:
Lower: 2,2 Vol %
Upper: 22 Vol %
Steam pressure at 35 °C: 533 hPa
Density at 20 °C: 0,761 g/cm³
Evaporation rate: Not determined.
Solubility in / Miscibility with:
Water: Fully miscible

9.2 Other information
No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity
No information known.

10.2 Chemical stability
Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions
Reacts with strong oxidising agents

10.4 Conditions to avoid
No further relevant information available.

10.5 Incompatible materials:
Air
Oxidising agents

10.6 Hazardous decomposition products:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:
Toxic in contact with skin.
Toxic if inhaled.
Toxic if swallowed.
Danger by skin resorption.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification:

<table>
<thead>
<tr>
<th>Oral</th>
<th>LD50</th>
<th>302 mg/kg (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dermal</td>
<td>LD50</td>
<td>35 mg/kg (rabbit)</td>
</tr>
</tbody>
</table>

Skin irritation or corrosion: May cause irritation
Eye irritation or corrosion: May cause irritation
Sensitization: No sensitizing effect known.

Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.

Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

Reproductive toxicity: No effects known.

Specific target organ system toxicity - repeated exposure: No effects known.
Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity: No further relevant information available.
12.2 Persistence and degradability: No further relevant information available.
12.3 Bioaccumulative potential: No further relevant information available.
12.4 Mobility in soil: No further relevant information available.

Additional ecological information:

General notes:
Do not allow product to reach ground water, water bodies or sewage system.
Water hazard class 2 (Assessment by list): hazardous for water.
Danger to drinking water if even small quantities leak into soil.
Also poisonous for fish and plankton in water bodies.
Toxic to aquatic life.
May cause long lasting harmful effects to aquatic life.
Avoid transfer into the environment.

12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Other adverse effects: No further relevant information available.
SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation
Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleaning agent: Water, if necessary with cleaning agent.

SECTION 14: Transport information

UN-Number
ADR, IMDG, IATA UN2334

14.2 UN proper shipping name
ADR 2334 ALLYLAMINE
IMDG, IATA ALLYLAMINE

14.3 Transport hazard class(es)
ADR
Class 6.1 (TF1) Toxic substances.
Label 6.1+3
IMDG, IATA
Class 6.1 Toxic substances.
Label 6.1+3

Packing group
ADR, IMDG, IATA I

14.5 Environmental hazards:
Environmentally hazardous substance, liquid

14.6 Special precautions for user
Warning: Toxic substances.
Kemler Number: 863
EMS Number: F-E,S-D

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC
Code Not applicable.

Transport/Additional information:

ADR
Excepted quantities (EQ): E5
Limited quantities (LQ) 0
Transport category 1
Tunnel restriction code C/D
UN "Model Regulation": UN2334, ALLYLAMINE, 6.1 (3), I

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Australian Inventory of Chemical Substances Substance is listed.
Standard for the Uniform Scheduling of Medicines and Poisons Substance is not listed.
National regulations
Information about limitation of use:
Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.
Classification according to VbF: B
Technical instructions (air):
Class Share in %
1 100,0

Water hazard class: Water hazard class 2 (Assessment by list): hazardous for water.
Other regulations, limitations and prohibitive regulations
ELINCS (European List of Notified Chemical Substances) Substance is not listed.
Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.
The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.
Substance is not listed.
Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Global Marketing Department
Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IAIA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
vPvB: very Persistent and very Bioaccumulative
ACGIH: American Conference of Governmental Industrial Hygienists (USA)
OSHA: Occupational Safety and Health Administration (USA)
NTP: National Toxicology Program (USA)
IARC: International Agency for Research on Cancer
EPA: Environmental Protection Agency (USA)
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Acute Tox. 3: Acute toxicity, Hazard Category 3
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2