

# Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 11/11/2008

Reviewed on 11/11/2008

## 1 Identification of substance:

### Product details:

**Product name:** Allylamine

**Stock number:** L07162

### Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company  
 Johnson Matthey Catalog Company, Inc.  
 30 Bond Street  
 Ward Hill, MA 01835-8099  
 Emergency Phone: (978) 521-6300  
 CHEMTREC: (800) 424-9300  
 Web Site: www.alfa.com

**Information Department:** Health, Safety and Environmental Department

### Emergency information:

During normal hours the Health, Safety and Environmental Department.  
 After normal hours call Chemtrec at (800) 424-9300.

## 2 Composition/Data on components:

### Chemical characterization:

#### Description: (CAS#)

Allylamine (CAS# 107-11-9): 100%

#### Identification number(s):

**EINECS Number:** 203-463-9

**Index number:** 612-046-00-4

## 3 Hazards identification

### Hazard description:



T Toxic

F Highly flammable

N Dangerous for the environment

### Information pertaining to particular dangers for man and environment

R 11 Highly flammable.

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

### Classification system

#### HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	3
FIRE	3
REACTIVITY	1

Health (acute effects) = 3

Flammability = 3

Reactivity = 1

## 4 First aid measures

### General information

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing has been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

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**After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

**After skin contact**

Immediately 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 a doctor.

**After swallowing**

Do not induce vomiting; immediately call for medical help.

Seek immediate medical advice.

## 5 Fire fighting measures

**Suitable extinguishing agents**

Use carbon dioxide, extinguishing powder or foam. Water may be ineffective but may be used for cooling exposed containers.

**Special hazards caused by the material, its products of combustion or resulting gases:**

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

**Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

## 6 Accidental release measures

**Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

**Measures for environmental protection:**

Do not allow material to be released to the environment without proper governmental permits.

**Measures for cleaning/collecting:**

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

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Keep away from ignition sources.

**Additional information:**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

**Handling****Information for safe handling:**

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

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Open and handle container with care.

**Information about protection against explosions and fires:**

Keep ignition sources away.

Protect against electrostatic charges.

Fumes can combine with air to form an explosive mixture.

**Storage****Requirements to be met by storerooms and receptacles:**

Store in a cool location.

**Information about storage in one common storage facility:**

Store away from oxidizing agents.

Store away from halogens.

**Further information about storage conditions:**

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

**8 Exposure controls and 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.

**Components with limit values that require monitoring at the workplace:**

Allylamine

	ppm
Denmark TWA	2 (skin)
Norway TWA	2
Russia	0.05 mg/m <sup>3</sup> -STEL (skin)
Sweden NGV	2; 6-KTV (skin)

**Components with limit values that require monitoring at the workplace:****Additional information:** No data**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

**Breathing equipment:**

Use suitable respirator when high concentrations are present.

**Protection of hands:** Impervious gloves**Eye protection:** Safety glasses**Body protection:** Protective work clothing.**9 Physical and chemical properties:****General Information**

<b>Form:</b>	Clear liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Acrid

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**Change in condition**

**Melting point/Melting range:** Not determined  
**Boiling point/Boiling range:** 52-53°C (126-127°F)  
**Sublimation temperature / start:** Not determined

**Flash point:** -28°C (-18°F)

**Ignition temperature:** 373.88°C (705°F)

**Decomposition temperature:** Not determined

**Explosion limits:**

**Lower:** 2.2 Vol %  
**Upper:** 22 Vol %

**Vapor pressure:** Not determined

**Density at 20°C (68°F):** 0.76 g/cm<sup>3</sup>

**Solubility in / Miscibility with**

**Water:** Fully miscible  
**Alcohols:** Fully miscible  
**Organic solvents:** Soluble in ether.

**10 Stability and reactivity****Thermal decomposition / conditions to be avoided:**

Decomposition will not occur if used and stored according to specifications.

**Materials to be avoided:**

Oxidizing agents  
 Halogens

**Dangerous reactions** No dangerous reactions known

**Dangerous products of decomposition:**

Carbon monoxide and carbon dioxide  
 Nitrogen oxides

**11 Toxicological information****Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral	LD50	78300 µg/kg (mam)
		57 mg/kg (mouse)
		102 mg/kg (rat)
Dermal	LD50	35 mg/kg (rabbit)
		Inhalative
	LC50/8H	177 ppm/8H (rat)
Irritation of skin	severe	500 mg/24H (rabbit)
Irritation of eyes	severe	50 mg/20s (rabbit)
	LD50	783 mg/kg (mam)

**Primary irritant effect:****on the skin:**

Irritant to skin and mucous membranes.  
 Corrosive effect on skin and mucous membranes.

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**on the eye:**

Irritating effect.

Strong corrosive effect.

**Sensitization:** No sensitizing effects known.**Other information (about experimental toxicology):**

Mutagenic effects have been observed on tests with laboratory animals.

**Subacute to chronic toxicity:****Subacute to chronic toxicity:**

The Registry of Toxic Effects of Chemical Substances (RTECS) reports the following effects in laboratory animals:

Behavioral - somnolence (general depressed activity).

Blood - pigmented or nucleated red blood cells.

Blood - changes in leukocyte (WBC) count.

Cardiac - changes in coronary arteries.

Cardiac - other changes.

Cardiac - cardiomyopathy including infarction.

Cardiac - changes in heart weight.

Liver - changes in liver weight.

Lungs, Thorax, or Respiration - structural or functional change in trachea or bronchi.

Lungs, Thorax, or Respiration - dyspnea.

Lungs, Thorax, or Respiration - chronic pulmonary edema.

Nutritional and Gross Metabolic - weight loss or decreased weight gain.

Related to Chronic Data - death.

Sense Organs and Special Senses (Eye) - lacrimation.

Sense Organs and Special Senses (Olfaction) - effect, not otherwise specified.

Skin and Appendages - primary irritation (after topical exposure).

Vascular - structural changes in vessels.

**Additional toxicological information:**

Danger through skin absorption.

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

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

**12 Ecological information:****Ecotoxicological effects:****Remark:** Toxic for fish**General notes:**

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Do not allow material to be released to the environment without proper governmental permits.

Toxic for aquatic organisms

**13 Disposal considerations****Product:****Recommendation**

Consult state, local or national regulations to ensure proper disposal.

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**Uncleaned packagings:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.**14 Transport information****DOT regulations:**

**Hazard class:** 6.1  
**Identification number:** UN2334  
**Packing group:** I  
**Poison inhalation hazard:** Yes  
**Proper shipping name (technical name):** ALLYLAMINE  
**Label:** 6.1+3

**Land transport ADR/RID (cross-border)**

**ADR/RID class:** 6.1 (TF1) Toxic substances  
**Danger code (Kemler):** 663  
**UN-Number:** 2334  
**Packaging group:** I  
**Description of goods:** 2334 ALLYLAMINE

**Maritime transport IMDG:**

**IMDG Class:** 6.1  
**UN Number:** 2334  
**Label:** 6.1+3  
**Packaging group:** I  
**Proper shipping name:** ALLYLAMINE

**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** 6.1  
**UN/ID Number:** 2334  
**Label:** 6.1+3  
**Packaging group:** I

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**Proper shipping name:** ALLYLAMINE**15 Regulations****Product related hazard informations:****Hazard symbols:**

T Toxic  
F Highly flammable  
N Dangerous for the environment

**Risk phrases:**

11 Highly flammable.  
23/24/25 Toxic by inhalation, in contact with skin and if swallowed.  
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

**Safety phrases:**

9 Keep container in a well-ventilated place.  
16 Keep away from sources of ignition - No smoking.  
24/25 Avoid contact with skin and eyes.  
45 In case of accident or if you feel unwell, seek medical advice immediately.  
61 Avoid release to the environment. Refer to special instructions/Safety data sheets

**National regulations**

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

**Information about limitation of use:**

For use only by technically qualified individuals.  
This product is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

**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 MSDS:** Health, Safety and Environmental Department.

**Contact:** Paul V. Connolly