

SAFETY DATA SHEET

Creation Date 08-Nov-2007

Revision Date 28-Apr-2022

Revision Number 3

1. Identification

Product Name 2,4-Lutidine

Cat No. : B22913

CAS No 108-47-4
Synonyms 2,4-Dimethylpyridine

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet**Company**

Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Emergency Telephone Number

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.
After normal business hours, call Carechem 24 at (866) 928-0789.

2. Hazard(s) identification**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|--|------------|
| Flammable liquids | Category 3 |
| Acute oral toxicity | Category 3 |
| Acute dermal toxicity | Category 4 |
| Acute Inhalation Toxicity - Vapors | Category 4 |
| Skin Corrosion/Irritation | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system. | |

Label Elements**Signal Word**

Danger

Hazard Statements

Flammable liquid and vapor
Toxic if swallowed
Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation
Harmful in contact with skin or if inhaled

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell

Skin

Call a POISON CENTER or doctor/physician if you feel unwell
If skin irritation occurs: Get medical advice/attention
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth

Fire

In case of fire: Use CO2, dry chemical, or foam for extinction

Storage

Store locked up
Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

3. Composition/Information on Ingredients

| Component | CAS No | Weight % |
|-------------------------|----------|----------|
| Pyridine, 2,4-dimethyl- | 108-47-4 | <=100 |

4. First-aid measures

| | |
|--|--|
| General Advice | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. |
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required. |
| Inhalation | Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. |
| Ingestion | Do NOT induce vomiting. Call a physician or poison control center immediately. |
| Most important symptoms and effects | None reasonably foreseeable. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting |
| Notes to Physician | Treat symptomatically |

5. Fire-fighting measures

| | |
|---|---|
| Suitable Extinguishing Media | Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers. |
| Unsuitable Extinguishing Media | No information available |
| Flash Point | 47 °C / 116.6 °F |
| Method - | No information available |
| Autoignition Temperature | No information available |
| Explosion Limits | |
| Upper | No data available |
| Lower | No data available |
| Sensitivity to Mechanical Impact | No information available |
| Sensitivity to Static Discharge | No information available |

Specific Hazards Arising from the Chemical

Flammable. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Vapors may form explosive mixtures with air.

Hazardous Combustion Products

Nitrogen oxides (NO_x). Carbon monoxide (CO). Carbon dioxide (CO₂).

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health
3

Flammability
2

Instability
1

Physical hazards
N/A

6. Accidental release measures

| | |
|---|--|
| Personal Precautions | Use personal protective equipment as required. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges. |
| Environmental Precautions | Should not be released into the environment. |
| Methods for Containment and Clean Up | Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. |

7. Handling and storage

| | |
|-----------------|---|
| Handling | Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Take precautionary measures against static discharges. |
| Storage. | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area. Keep in properly labeled containers. Keep away from water or moist air. Store under an inert atmosphere. Protect from moisture. Incompatible Materials. Acids. Strong oxidizing agents. Acid chlorides. Chloroformates. |

8. Exposure controls / personal protection

| | |
|---|---|
| <u>Exposure Guidelines</u> | This product does not contain any hazardous materials with occupational exposure limitsestablished by the region specific regulatory bodies. |
| Engineering Measures | Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas. |
| <u>Personal Protective Equipment</u> | |
| Eye/face Protection | Tight sealing safety goggles. Face protection shield. |
| Skin and body protection | Wear appropriate protective gloves and clothing to prevent skin exposure. |
| Respiratory Protection | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |
| Hygiene Measures | When using do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. |

9. Physical and chemical properties

| | |
|---|------------------------------|
| Physical State | Liquid |
| Appearance | Light yellow |
| Odor | No information available |
| Odor Threshold | No information available |
| pH | Not applicable |
| Melting Point/Range | -60 °C / -76 °F |
| Boiling Point/Range | 159 °C / 318.2 °F @ 760 mmHg |
| Flash Point | 47 °C / 116.6 °F |
| Evaporation Rate | No information available |
| Flammability (solid,gas) | Not applicable |
| Flammability or explosive limits | |
| Upper | No data available |

| | |
|--|--------------------------|
| Lower | No data available |
| Vapor Pressure | No information available |
| Vapor Density | 3.69 |
| Specific Gravity | 0.920 |
| Solubility | 15 g/100 g (20°C) |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | No information available |
| Decomposition Temperature | No information available |
| Viscosity | No information available |
| Molecular Formula | C7 H9 N |
| Molecular Weight | 107.15 |

10. Stability and reactivity

| | |
|----------------------------------|--|
| Reactive Hazard | None known, based on information available |
| Stability | Hygroscopic. |
| Conditions to Avoid | Keep away from open flames, hot surfaces and sources of ignition. Incompatible products. Exposure to moist air or water. |
| Incompatible Materials | Acids, Strong oxidizing agents, Acid chlorides, Chloroformates |
| Hazardous Decomposition Products | Nitrogen oxides (NO _x), Carbon monoxide (CO), Carbon dioxide (CO ₂) |
| Hazardous Polymerization | No information available. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information

Acute Toxicity

Product Information

Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-------------------------|------------------------|-------------|-----------------|
| Pyridine, 2,4-dimethyl- | LD50 = 200 mg/kg (Rat) | Not listed | Not listed |

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|-----------------|--|
| Irritation | No information available |
| Sensitization | No information available |
| Carcinogenicity | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component | CAS No | IARC | NTP | ACGIH | OSHA | Mexico |
|-------------------------|----------|------------|------------|------------|------------|------------|
| Pyridine, 2,4-dimethyl- | 108-47-4 | Not listed | Not listed | Not listed | Not listed | Not listed |

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system

STOT - repeated exposure None known

| | |
|---|---|
| Aspiration hazard | No information available |
| Symptoms / effects, both acute and delayed | Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting |
| Endocrine Disruptor Information | No information available |
| Other Adverse Effects | The toxicological properties have not been fully investigated. |

12. Ecological information

Ecotoxicity

Do not empty into drains.

| | |
|--------------------------------------|--|
| Persistence and Degradability | Soluble in water Persistence is unlikely based on information available. |
| Bioaccumulation/ Accumulation | No information available. |
| Mobility | Will likely be mobile in the environment due to its water solubility. |

13. Disposal considerations

| | |
|-------------------------------|---|
| Waste Disposal Methods | Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification. |
|-------------------------------|---|

14. Transport information

DOT

| | |
|--------------------------------|----------------------------------|
| UN-No | UN1992 |
| Proper Shipping Name | FLAMMABLE LIQUIDS, TOXIC, N.O.S. |
| Technical Name | Pyridine, 2,4-dimethyl- |
| Hazard Class | 3 |
| Subsidiary Hazard Class | 6.1 |
| Packing Group | III |

TDG

| | |
|--------------------------------|---------------------------------|
| UN-No | UN1992 |
| Proper Shipping Name | FLAMMABLE LIQUID, TOXIC, N.O.S. |
| Hazard Class | 3 |
| Subsidiary Hazard Class | 6.1 |
| Packing Group | III |

IATA

| | |
|--------------------------------|---------------------------------|
| UN-No | UN1992 |
| Proper Shipping Name | FLAMMABLE LIQUID, TOXIC, N.O.S. |
| Hazard Class | 3 |
| Subsidiary Hazard Class | 6.1 |
| Packing Group | III |

IMDG/IMO

| | |
|--------------------------------|---------------------------------|
| UN-No | UN1992 |
| Proper Shipping Name | FLAMMABLE LIQUID, TOXIC, N.O.S. |
| Hazard Class | 3 |
| Subsidiary Hazard Class | 6.1 |
| Packing Group | III |

15. Regulatory information

United States of America Inventory

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|-------------------------|----------|------|---|-----------------------------|
| Pyridine, 2,4-dimethyl- | 108-47-4 | X | ACTIVE | - |

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)

Not applicable

TSCA 12(b) - Notices of Export

Not applicable

International Inventories

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component | CAS No | DSL | NDL | EINECS | PICCS | ENCS | ISHL | AICS | IECSC | KECL |
|-------------------------|----------|-----|-----|-----------|-------|------|------|------|-------|------|
| Pyridine, 2,4-dimethyl- | 108-47-4 | X | - | 203-586-8 | X | X | X | X | X | - |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)**U.S. Federal Regulations****SARA 313**

Not applicable

SARA 311/312 Hazard Categories

See section 2 for more information

CWA (Clean Water Act)

Not applicable

Clean Air Act

Not applicable

OSHA - Occupational Safety and Health Administration

Not applicable

CERCLA

Not applicable

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Not applicable

U.S. Department of Transportation

Reportable Quantity (RQ): N

DOT Marine Pollutant N

DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations**Mexico - Grade**

Moderate risk, Grade 2

Authorisation/Restrictions according to EU REACH

Not applicable

| Component | CAS No | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|-------------------------|----------|---|---|---|
| Pyridine, 2,4-dimethyl- | 108-47-4 | - | - | - |

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

| Component | CAS No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|-------------------------|----------|----------------|------------------------------|---------------------------|--|
| Pyridine, 2,4-dimethyl- | 108-47-4 | Not applicable | Not applicable | Not applicable | Not applicable |

| Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|-------------------------|----------|---|--|----------------------------|------------------------------------|
| Pyridine, 2,4-dimethyl- | 108-47-4 | Not applicable | Not applicable | Not applicable | Not applicable |

16. Other information

| | |
|------------------|---|
| Prepared By | Health, Safety and Environmental Department Email: tech@alfa.com www.alfa.com |
| Creation Date | 08-Nov-2007 |
| Revision Date | 28-Apr-2022 |
| Print Date | 28-Apr-2022 |
| Revision Summary | SDS authoring systems update, replaces ChemGes SDS No. 108-47-4/2. |

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS