



## Alpha Picoline Safety Data Sheet

According to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of compilation	:	April 05, 2012
File Name	:	0002Gj Ghs12 Div.2 sds Alpha picoline
Revision Number	:	12
Date of Issue	:	January 01, 2024
Revision Due Date	:	December, 2026
Supersedes date	:	February 11, 2021
Supersedes version	:	0002Gj Ghs11 Div.2 sds Alpha picoline

# Alpha Picoline

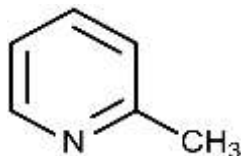
## Safety Data Sheet

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### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product identifier

PRODUCT NAME : Alpha Picoline  
CAS RN : 109-06-8  
EC# : 203-643-7  
SYNONYMS : 2-methylpyridine, Alpha-methyl pyridine, Alpha-Picoline, O-Picoline, 2-Picoline  
SYSTEMATIC NAME : Pyridine, 2-methyl; 2-Methylpyridine  
MOLECULAR FORMULA : C<sub>6</sub>H<sub>7</sub>N  
STRUCTURAL FORMULA:



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

##### 1.2.1. Relevant identified uses

It is used as an intermediate in the pharmaceutical industry for the manufacture of 2-pyridinealdoxime methochloride, perhexiline, neflinavirmesylate, Bromazepam, chromium picolinate etc. It is also used as an intermediate in the agrochemical industry for the manufacture of azamethiphos, picloram, nitrapyrin etc. and in making Vat orange1, which is used as a colorant.

**Uses advised against:** None

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

**Jubilant Ingrevia Limited**

**FACTORY & REGISTERED OFFICE:** Jubilant Ingrevia Limited, Bhartiagram, Gajraula, District: Amroha, Uttar Pradesh-244223, India.  
T +91-5924-267437 & +91-5924-267438

**HEAD OFFICE:** Jubilant Ingrevia Limited, Plot 1-A, Sector 16-A, Institutional Area, Noida, Uttar Pradesh, 201301 - India  
T +91-120-4361000 - F +91-120-4234881 / 84 / 85 / 87 / 95 / 96 [support@jubl.com](mailto:support@jubl.com) - [www.jubilantingrevia.com](http://www.jubilantingrevia.com)

#### 1.4. Emergency telephone number

**For Chemical Emergency ONLY (in the case of fire, leak, spill, exposure or accident) Call**

**Chemtrec:** 1-800-424-9300 (US), 1-703-527-3887 (Outside U.S.)

**Chemtrec (India):** 000-800-100-7141

**For ALL other emergencies call Emergency Control Room Gajraula at 99970 22412**

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Flammable Liquid: Category 3  
Acute Toxicity Oral: Category 4  
Acute Toxicity Dermal: Category 4  
Acute Toxicity Inhalation: Category 4  
Serious eye damage/irritation: Category 2  
Specific target organ toxicity: Category 3  
(After single exposure)

#### 2.2. Label Elements

**Hazard Pictogram:** GHS 02, GHS 07



**Signal Word:** Warning!

#### **HAZARD AND PRECAUTIONARY STATEMENTS:**

##### HAZARD STATEMENTS

- H226: Flammable liquid and vapour.

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- H302: Harmful if swallowed.
- H312: Harmful in contact with skin.
- H332: Harmful if inhaled.
- H319: Causes serious eye irritation.
- H335: May cause respiratory irritation.

### PRECAUTIONARY STATEMENTS

- P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P233: Keep container tightly closed.
- P240: Ground/bond container and receiving equipment.
- P241: Use explosion-proof electrical/ventilating/light/.../equipment.
- P242: Use only non-sparking tools.
- P243: Take precautionary measures against static discharge.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P264: Wash hands thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
- P271: Use only outdoors or in a well-ventilated area.
- P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P330: Rinse mouth.
- P302+352: IF ON SKIN: Wash with soap and water.
- P312: Call a POISON CENTER or doctor/physician if you feel unwell.
- P322: Specific measures (see ... on this label).
- P363: Wash contaminated clothing before reuse.
- P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
- P337+313: Get medical advice/attention.
- P403+P235: Store in a well-ventilated place. Keep cool.
- P405: Store locked up.
- P501: Dispose of contents/container to local/regional/national/international regulations.

### SECTION 3: Composition/information on ingredients

Chemical	CAS #	Purity	GHS-US classification
Alpha Picoline	109-06-8	~99%	Flammable Liquid: Category 3 Acute Toxicity Oral: Category 4 Acute Toxicity Dermal: Category 4 Acute Toxicity Inhalation: Category 4 Serious eye damage/irritation: Category 2 Specific target organ toxicity: Category 3 (After single exposure)

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- Eyes: If in eyes rinse cautiously with water for at least 15 minutes. Remove contact lenses if easy to do so. Continue rinsing. Seek immediate medical attention.
- Skin: Immediately take off all contaminated clothing. Wash thoroughly with water for at least 15 minutes. Seek medical attention.
- Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Monitor for respiratory distress. Apply artificial respiration if not breathing. Do not use mouth-to-mouth methods 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.
- Ingestion: If swallowed rinse mouth. Do NOT induce vomiting by use of emetics. Seek medical attention, call a poison center if you feel unwell.

#### 4.2. Most important symptoms and effects, both acute and delayed

- **Acute effects:**
  - Eyes:** Redness, pain, burns, loss of vision.
  - Skin:** Pain, redness, burns. Behavioral somnolence observed in test animals. Neurotoxicity indication in rats via dermal adsorption.
  - Ingestion:** Abdominal pain, burning sensation, diarrhea, shock or collapse, sore throat or vomiting.
  - Inhalation:** Sore throat, cough, burning sensation, shortness of breath, labored breathing, headache, nausea and vomiting.
- **Chronic effects:**
  - May affect liver function (reversible increased liver weight), blood clotting factors, and decrease in red blood cells.



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

- Treat symptomatically.

### SECTION 5 : FIRE-FIGHTING MEASURES

#### Extinguishing media

- *Appropriate extinguishing media:* Dry chemical powder, carbon dioxide, and alcohol resistant foam. Water may be in effective. Water sprays can be effective in cooling down the fire-exposed containers and knocking down the vapours. Water jets may be used to flush spills away and dilute the same to non-flammable mixtures fog or alcohol-resistant foam by directing streams to the periphery of the fires to prevent spread.

#### 5.2. Special hazards arising from the substance or mixture

- Toxic vapors may be released on thermal decomposition including nitrogen oxides, carbon monoxide and carbon dioxide.
- High vapor concentration may result in an explosion hazard.
- Vapors are heavier than air. May travel considerable distance from source and flashback.

#### 5.3. Advice for firefighters

- Evacuate the area and fight fires from a safe distance.
- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions or as per locally valid procedures.
- Fire-fighters must wear Self Contained Breathing Apparatus (SCBA)
- Chemical is water-soluble. Report any run-off of firewaters contaminated with this chemical as per local and federal procedures applicable.

### SECTION 6 : ACCIDENTAL RELEASE MEASURES

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

##### Minor Spills

- Clean up all spills immediately following relevant Standard Operating Procedures.
- Avoid breathing vapors and contact with skin and eyes.
- Shut off leak source if possible.
- Shut off all possible sources of ignition.
- Wear protective clothing, boots, impervious gloves and safety glasses.
- Wipe up.
- Decontaminate all equipment.
- Use non-sparking tools.

##### Major Spill

- Alert Emergency Responders and tell them location and nature of hazard.
- Shut off all possible sources of ignition and increase ventilation.
- Wear protective clothing, full boots, impervious gloves, safety glasses and Self Contained Breathing Apparatus (SCBA), as may be deemed appropriate.
- Clear area of personnel and move upwind.
- Stop leaks if possible.
- Prevent, by any means available, spillage from entering drains or water and watercourses.
- Collect recoverable product into labeled containers for recycling, recovery or disposal.
- Contain spill with sand, earth or vermiculite.
- Spread area with lime or absorbent material, and leave for at least 1 hour before washing.
- Clean up all tools and equipment.
- Inform authorities in event of contamination of any public sewers, drains or water bodies.

#### 6.2. Environmental precautions

- Clean up all spills immediately following relevant Standard Operating Procedures.
- Inform authorities in event of contamination of any public sewers, drains or water bodies.
- Wipe up.
- Prevent, by any means available, spillage from entering drains or water and watercourses.
- Collect recoverable product into labeled containers for recycling, recovery or disposal.
- Contain spill with sand, earth or vermiculite.
- Spread area with lime or absorbent material, and leave for at least 1 hour before washing.

#### 6.3. Methods and material for containment and cleaning up

- Clean up all tools and equipment.
- Decontaminate all equipment.

#### 6.4. Reference to other sections

- For more information please refer to section 8 and 13.

### SECTION 7: HANDLING AND STORAGE



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### 7.1. Precautions for safe handling

- Do not breathe vapor or mist.
- Wear protective gloves/clothing and eye/face protection.
- Wash thoroughly after handling.
- Ground and secure containers when dispensing or pouring product.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Launder contaminated clothing before re-use.
- If on skin or hair, IMMEDIATELY remove all contaminated clothing and rinse/shower with plenty of water.
- Use in a well-ventilated place/Use protective clothing commensurate with exposure levels.

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

- Store at ambient temperature in a dry and well ventilated place.
- Store away from incompatible materials.
- Store away from areas of high fire hazard and should be periodically inspected & monitored.
- Keep only in original container.
- Keep securely closed when not in use.

## SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### • Exposure Limits Values

Chemical name	ACGIH TLV	OSHA PEL
Alpha Picoline	Not established	Not established

#### • Exposure Limits (International):

- AIHA WEEL = 2 ppm (skin) as 8-hr TWA; 5 ppm as 15 minute STEL
- USSR: 5 mg/m<sup>3</sup>

### 8.2. Exposure controls

#### Appropriate Engineering Controls:

- Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. Local ventilation is usually preferred. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Personal Protection:

- Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.
- **Hands:** Wear appropriate protective gloves to prevent skin exposure.
- **Eyes:** Safety goggles/ Chemical Safety glasses and Face shield.
- **Clothing:** Boots and clothing to prevent contact.
- **Respirator:** Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

## SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

#### • Information on basic physical and chemical properties.

Sr.No.	Parameter	Typical value
1.	Appearance	Colorless to yellow tinted liquid
2.	Odor	Characteristic
3.	Odor Threshold	0.05-0.1 ppm
4.	pH	8.5 (100 g/L solution in water at 20°C); pKa = 6.00
5.	Melting point/Freezing point	(-) 70 °C at 1 013 hPa
6.	Boiling Point	127 - 129 °C
7.	Flash point	27°C closed cup (80.6°F)
8.	Evaporation rate (n-BuAc=1)	Not available
9.	Flammability (Liquid)	Flammable
10.	Upper/lower flammability or Explosive limits	1.4%-8.6%
11.	Vapor pressure	12 hPa at 20 °C

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12.	Vapor density (air=1)	2.7
13.	Relative density	0.944
14.	Solubility	Miscible in water, 1000 g/L Temp: 25 °C
15.	Partition coefficient : n-(Octonol / water)	1.11
16.	Auto-ignition temperature	535 °C at 1 013 hPa
17.	Decomposition temperature	Not available
18.	Viscosity	0.808 m Pa S at 20 °C
19.	Explosive property	No
20.	Oxidizing property	No

### SECTION 10: STABILITY AND REACTIVITY

- **Stability:** Stable under normal temperature and pressures. Color may increase over time depending on storage conditions but this does not affect the product purity.
- **Conditions to avoid:** Keep away from heat, sparks, flame, high temperature and incompatible chemicals.
- **Incompatible chemicals:** Acids and acid chlorides, oxidizing materials like hydrogen peroxide and sulphuric acid and chloroformates.
- **Hazardous decomposition:** Acids and acid chlorides, oxidizing materials like hydrogen peroxide and sulphuric acid and chloroformates.
- **Hazardous Polymerization:** Not reported.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1. Information on toxicological effects

##### a) Acute toxicity

Alpha Picoline causes irritation in contact with skin and eyes. It is toxic in contact with skin. It is harmful if swallowed and if inhaled.

- RTECS#: TJ4900000
- LD50/LC50

Acute Oral LD50	790 Mg/Kg
Acute Dermal LD50 :( Rabbit)	387.04 mg/kg
Acute Dermal LD50 :( Rabbit)	950-1900 mg/kg
Acute Inhalation LC50:	13.2 mg/l
Acute Inhalation LC50: (Rat)	> 2 000 - < 4 000 ppm
Acute Inhalation Rat LC <sub>Lo</sub>	4000ppm/4 Hr
Intraperitoneal Rat LD50	200mg/Kg
Intraperitoneal Mouse LD50	529mg/Kg

##### b) Skin corrosion/irritation

Causes skin irritation.

##### c) Serious eye damage/irritation

Causes eye irritation.

##### d) Respiratory or skin sensitization

No data is available

##### e) Germ cell mutagenicity

Genotoxic activity was absent (i.e., DNA lesions were not induced and mutagenic activity was not induced) when tested using the following tests: DNA single-strand breaks measurement in V79 cells, HGPRT gene mutation assay in V79 cells, and Ames Salmonella/microsome test.

##### f) Carcinogenicity

Not listed by NTP, IARC and OSHA.

Not present on the EU CMR list.

According to information presently available Alpha Picoline is not found to be carcinogenic.

##### g) Reproductive toxicity

No data is available.

##### h) STOT-single exposure

May cause respiratory irritation.



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- i) **STOT- repeated exposure**  
No data available.
- j) **Aspiration Hazards**  
No data available.

### SECTION 12: ECOLOGICAL INFORMATION

#### Toxicity

##### 12.1 Ecotoxicity:

- **Acute toxicity to fish**
  - *Fish (Pimephalespromelas) 96-hr LC50: 897 mg/l*
  - *PimephalesPromelas 96-hr EC50: 772 mg/l*
  - **Acute toxicity to invertebrates**
  - *Daphnia magna 24 hr EC50: 221.4 mg/L*
- Based on the estimated values it is expected to be non-toxic to fish and other aquatic organisms.

##### 12.2 Persistence and degradability

It is not expected to be readily biodegradable in aerobic and anaerobic conditions. Alpha Picoline is expected to be found predominantly in soil and its persistence estimate is based on its transformation in this medium. It is also expected to be found in water, but not in sediment. Its half-life in soil, 75 days, exceeds the EPA criteria of  $\geq 2$  months (and  $\leq 6$  months). Therefore, Alpha Picoline is estimated to be persistent in the environment.

##### 12.3 Bioaccumulative potential

- BCF = 2.508
  - Log Kow = 1.11
- Based on the Log Kow and Bioconcentration factor value it is expected to have low potential to concentrate in fatty tissue of fish and aquatic organisms.

##### 12.4 Mobility in soil

- Log Koc = 1.728. Low Sorption.
- Henry's Law Constant = 0.788 Pa m<sup>3</sup>/molat 25 degrees
- Log Kow = 1.11 (estimated). Low potential to bioaccumulate.

##### 12.5 Other adverse effects

###### Environment Fate:

Based on the environmental modeling, this material has a low potential to get absorbed in the organic matter of soil and is slightly volatile from water bodies. Since this is an estimated result it is recommended that the material should not be disposed into the environment. The material should never be disposed into the sewage.

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

- Burn in a chemical incinerator equipped with an afterburner and scrubber.
- Exert extra care in igniting, as this material is flammable.
- Dispose of this material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable federal, state or local laws. Note that disposal regulations may also apply to empty containers and equipment rinsates.

### SECTION 14: TRANSPORT INFORMATION

- This substance is considered to be Hazardous for transport by Air/Rail/Road and Sea and thus regulated by IATA/ICAO/US DOT/IMO/IMDG.


S.No	Agency	UN Number	Proper Shipping name	Hazard Class	Packing Group
Land Transport	DOT	UN 2313	Picolines, [2-Picoline]	Flammable liquid class 3	III
Maritime Transport	IMDG	UN 2313	Picolines, [2-Picoline]	Flammable liquid class 3	III
Air Transport	IATA	UN 2313	Picolines, [2-Picoline]	Flammable liquid class 3	III



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Hazard Label	Flammable Liquid Class-3	
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### Environmental hazards

- This chemical is not a marine pollutant.

## SECTION 15: REGULATORY INFORMATION

- European Union Information

### Classification as per CLP Regulation 1272/2008:

- **Hazards Class and Category:** Flam Liq Cat 3, Acute Tox.4; Eye irrit.2; STOT SE 3
- **Hazard Statements:** H226; H302; H312; H332; H319; H335.

### Chemical Inventory Lists:

#### Status

TSCA:	Present
EINECS:	203-643-7
Canada (DSL/NDSL)	DSL
Japan:	(5)-711
Korea:	KE-25315
Australia:	Present
New Zealand:	Present
China:	Present
Philippines:	Present
Switzerland:	G-3181

### US Regulations

- **CERCLA Hazardous substance and Reportable Quantity:** 2-Picoline ((CAS# 109-06-8) listed (Hazardous substance RQs: 5000 lb)
- **SARA 313:** This material contains 2-Picoline (CAS# 109-06-8, 98 0%), which is subject the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.  
SARA 313 – Threshold Values 1.0 %
- **SARA 311/312 Hazard Categories**  
See section 2 for more information
- **Clean Air Act:**  
CAS# 109-06-8 is not listed in any hazardous air pollutants.  
CAS# 109-06-8 is not listed in Class 1 Ozone depleters.  
CAS# 109-06-8 is not listed in any Class 2 Ozone depleters.
- **Clean Water Act:**  
CAS# 109-06-8 is not listed as Hazardous Substances under the CWA.  
CAS# 109-06-8 is not listed as Priority Pollutants under the CWA.  
CAS# 109-06-8 is not listed as Toxic Pollutants under the CWA.
- **California Proposition 65:**  
CAS# 109-06-8 not listed

### EU Regulations

- Water Hazard Classes (WGK): WGK 1 - Low hazards to water

## SECTION 16: OTHER INFORMATION





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### a) Compilation information of safety data sheet

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### b) A key or legend to aberrations and acronyms used in the safety data sheet

- PBT =Persistent Bioaccumulative and Toxic.
- vPvB= Very Persistent and Very Bioaccumulative.
- SCBA= Self Contained Breathing Apparatus.
- NIOSH REL= National Institute for Occupational Safety and Health Recommended Exposure Limit. OSHA PEL=Occupational Safety and Health Administration Permissible Exposure Limit.
- OELTWA= Occupational Exposure Limit Time Weighted Averages.
- IDLH= Immediately Dangerous to Life or Health.
- UEL= Upper Explosive Limit.
- LEL= Lower Explosive Limit.
- RTECS= Registry of Toxic Effects of Chemical Substances.
- NTP=National Toxicology Program.
- IARC= International Agency for Research on Cancer.
- EPA=Environmental Protection Agency.
- TSCA= Toxic Substances Control Act.
- CERCLA= Comprehensive Environmental Response, Compensation, and Liability Act.
- SARA= Superfund Amendments and Reauthorization Act.
- NFPA= National Fire Protection Association.
- WHIMS= Workplace Hazardous Materials Information System.
- DSL/NDL= Domestic/Non-Domestic Substances List.
- CSR=Chemical Safety Report.
- BCF = Bio Concentration Factor.
- DNEL = Derived No Effect Level.
- PNEC = Predicted No Effect Concentration.
- TLV = Threshold Limit Value.
- ACGIH = American Conference of Governmental Industrial Hygienists.
- REACH = Registration, Evaluation Authorization and Restriction of Chemicals.
- CLP = Classification, Labelling and Packaging.
- LD / LC = Lethal Doses / Lethal Concentration.
- GHS = Globally Harmonized System.
- ADR = Accord European relative au transport international de marchandises.
- IMDG-Code = International Maritime Code for Dangerous Goods.
- EmS = Emergency measures on Sea.
- ICAO = International Civil Aviation Organization.
- IATA/DGR= International Air Transport Association/Dangerous Goods Regulation.

### c) Key Literature reference and sources for data

#### Biographical reference and data sources

- Globally Harmonized System of Classification and Labelling of Chemicals.
- CLP REG (regulation) (EC) no. 1272/2008, last modification by regulation (EC) no. 790/2009.
- APCISS

#### SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

(End of Safety Data Sheet)