



Safety Data Sheet

As per Globally Harmonized System (GHS)

Product Identification: 2-Amino-4-methylpyridine 0017A06 Div.03 sds 2-Amino-4-methylpyridine

Date of issue: June 07, 2013

SDS Code : 0017A06 Div.03 sds 2-Amino-4-methylpyridine

Date of Compilation : April 17, 2012

Date of Revision : June 07, 2013

Due Date of Revision: May, 2015

Revision Number : 06

Version Number : 0017A06 Div.03 sds 2-Amino-4-methylpyridine

Supersedes date : October 29, 2012

Supersedes version : 0017A05 Div.03 sds 2-Amino-4-methylpyridine



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SECTION 1.:

IDENTIFICATION

PRODUCT NAME: 2-Amino-4-methylpyridine

CAS RN : 695-34-1

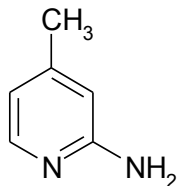
EC# : 211-780-9

SYNONYMS : 4-methyl-2-pyridylamine;2-Amino-4-methylpyridine2-Amino-4-picoline;
4-Methyl-2-aminopyridine;4-Methyl-2-pyridinamine;4-Picolylamine.

SYSTEMATIC NAME: 2-Amino-4-methylpyridine

MOLECULAR FORMULA: C₆H₈N₂

STRUCTURAL FORMULA:



FACTORY & REGISTERED OFFICE:

Jubilant Life Sciences Limited
Bhartiagram, Gajraula
District: Amroha
Uttar Pradesh-244223, India
PHONE NO: +91-5924-252353 to 252360
Contact Department-Safety: Ext. 7424
FAX NO : 91-5924-252352

HEAD OFFICE:

Jubilant Life Sciences Ltd.
Plot 1-A, Sector 16-A,
Institutional Area, Noida,
Uttar Pradesh-201301 India.
PHONE NO: +91-120-4361000
FAX NO : +91-120- 4234881 / 84 / 85 / 87 / 95 / 96
Email: support@jubl.com
Website: www.jubl.com



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Emergency telephone: Medical and Transport Emergencies: +91-9997022412 (India)
Logistics Emergencies: +91-120-4365441(India)

Product Uses:

- It is used as an intermediate in the pharmaceutical industry. It is also used for commercial purposes.

SECTION 2:

HAZARDS IDENTIFICATION

GHS CLASSIFICATION

Skin corrosion / irritant: Category 2

Acute toxicity Oral: Category 3

Acute Toxicity Dermal: Category 3



Hazard Pictogram: GHS 06

Signal Word: Danger!

HAZARD AND PRECAUTIONARY STATEMENTS:

HAZARD STATEMENTS

- H301: Toxic if swallowed.
- H311: Toxic in contact with skin.
- H315: Causes skin irritation.

PRECAUTIONARY STATEMENTS

Prevention

- P264: Wash hands thoroughly after handling.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P270: Do not eat, drink or smoke when using this product.

Response

- P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P330: Rinse mouth.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P312: Call a POISON CENTER or doctor/physician if you feel unwell.
- P361: Remove/Take off immediately all contaminated clothing.
- P332+P313: If skin irritation occurs: Get medical advice/attention.
- P362: Take off contaminated clothing and wash before reuse.



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Storage

- P405: Store locked up.

Disposal

- P501: Dispose of contents/container to local/regional/national/international regulations.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Sr.No.	Chemical	CAS #	EC#	Purity
1.	2-Amino-4-methylpyridine	695-34-1	211-780-9	>98%

SECTION 4: FIRST AID MEASURES

Key symptoms

Acute effects:

- Toxic if swallowed and in contact with skin. Irritating. It is irritating to skin. May cause convulsions.
- **Target organs:** Damage to the Heart and may affect Nervous System.

Chronic effects:

- To the best of our knowledge chronic effects of this compound have not been fully investigated.

FIRST AID:

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

SECTION 5 : FIRE-FIGHTING MEASURES

Flash Point: 118 °C

Flammability: Non Flammable material

Extinguishing media:

- *Appropriate extinguishing media:* Dry chemical powder, chemical foam, and alcohol resistant foam. Do not use water jet or fog (spray) to extinguish. Water sprays can be effective in cooling down the fire-exposed containers and knocking down the vapours. Water can be effective in cooling down the fire-exposed containers. Do not get water inside the containers



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Special Protective Equipment and Precautions for Fire Fighter:

- This material is extremely hazardous to health, but fire fighters may enter areas with extreme care. Full protective clothing including a self-contained breathing apparatus, coat, pants, gloves, boots and bands around legs, arms and waist should be provided. No skin surface should be exposed.
- 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) and full protective clothing. The chemical is harmful in contact with skin.
- Report any run-off of fire waters contaminated with this chemical as per local and federal procedures applicable.

Unusual fire and explosion hazard:

- Toxic vapors may be released on thermal decomposition including nitrogen oxides, carbon monoxide carbon di-oxide and cyanide.
- High vapor concentration may result in an explosion hazard.
- When heated to decomposition, it emits highly toxic fumes of phosgene and chlorides.
- Vapors are heavier than air. May travel considerable distance from source and flashback.
- Water may cause frothing if it gets below surface of the liquid and turns to steam. Contact with metals may evolve flammable hydrogen gas.

SECTION 6 :

ACCIDENTAL RELEASE MEASURES

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.

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.



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- 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.

SECTION 7: HANDLING AND STORAGE

Handling

- Do not breathe dust, 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.

Storage

- Store in a cool & dry place.
- Store away from incompatible materials.
- Keep only in original container.
- Keep securely closed when not in use.



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SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Limits Values

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
2-Amino-4-methylpyridine	Not established	Not established	Not established

Exposure Limits (International):

- Not available.

OSHA Vacated PELs:

- No OSHA Vacated PELs are listed for this chemical.

Derived No-Effect-Levels (DNEL) / Predicted No-effect-concentration (PNEC)

- DNEL and PNEC data not available.

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.

For emergency situations, wear a positive pressure, pressure-demand, full face piece self-contained breathing apparatus (SCBA) or pressure- demand supplied air respirator with escape SCBA and a fully-encapsulating, chemical resistant suit. (EPA, 1998)

General Hygiene and general comments:

- Wash hands and face after working with substance.
- Immediately change contaminated clothing.
- Apply skin protective barrier cream.



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SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

- Information on basic physical and chemical properties.

Sr.No.	Parameter	Typical value
1.	Appearance	Off-white solid flakes
2.	Odor	Similar to pyridine
3.	Odor Threshold	Not available
4.	Melting point	98-100 °C
5.	Boiling point	230 °C @ 760.00 mm Hg
6.	Flash point	118 °C
7.	Evaporation rate (n-BuAc=1)	Not available
8.	Explosive limits	Not available
9.	Vapor pressure	Not available
10.	Vapor density (air=1)	3.2
11.	Specific gravity (water=1)	Not available
12.	Solubility	Soluble in water (41 mg/ml at 20 °C), lower alcohols (slightly), chloroform, ethyl acetate, and DMF
13.	pH	Not available
14.	Log Kow (Octanol/water)	1.08
15.	Auto-ignition temperature	Not available



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16.	Decomposition temperature	Not available
17.	Viscosity	Not available
18.	Molecular Weight	108.14
19.	pKa (@25 ⁰ C)	Not available
20.	Log Koc	1.86
21.	Flammable	No
22.	Oxidizer	No
23.	Corrosive material	No
24.	Explosive material	No

SECTION 10: STABILITY AND REACTIVITY

- **Stability:** Stable under normal condition of temperature and pressure.
- **Conditions to avoid:** Keep away from moisture and incompatible chemicals.
- **Incompatible chemicals:** Acids and acid chlorides, and mineral acids like Sulphuric acid
- **Hazardous decomposition:** Thermal decomposition may produce Cyanide, nitrogen oxides and carbon monoxide.
- **Hazardous Polymerization:** Not reported.

SECTION 11: TOXICOLOGICAL INFORMATION

a) *Acute toxicity*

- Toxic if swallowed and in contact with skin. Irritating. It is irritating to skin. May cause convulsions.
- Target organs: Damage to the Heart and may effect Nervous System.

RTECS # TJ5150000

LD50/LC50:

- **ACUTE ORAL LD50 (RAT)** = 200 mg/kg
- **ACUTE DERMAL LD50:(Guinea Pig)** = 500mg/kg



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- 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**
 - No information available.
- f) **Carcinogenicity**
 - Not listed by NTP, IARC and OSHA.
 - Not present on the EU CMR list.
 - According to information presently available 2-Amino-4-methylpyridine is not found to be carcinogenic.
- g) **Reproductive toxicity**
 - No data is available.
- h) **STOT-single exposure**
 - No data is available.
- i) **STOT- repeated exposure**
 - No data available.
- j) **Aspiration Hazards**
 - No data available.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity:

- The Ecotoxicity data is not available.
- Fish ChV (estimated) = 0.7 (mg/l). Toxic effects are expected on saturation.

Persistence and degradability:

- It is expected to be biodegradable in aerobic and anaerobic conditions.

Bio accumulative potential:

- BCF = 3.2
- Log Kow= 1.08

Based on the Log Kow and Bio concentration factor value it is expected to have low potential to concentrate in fatty tissue of fish and aquatic organisms relative to its surroundings.

Mobility in soil (Predicted):

- Log Koc= 1.86 (estimated). Low sorption.
- Henry's Law Constant= 6.14E-007 atm-m³/mole at 25 degrees. Slightly volatile from aqueous bodies.
- Log Kow=1.08 (estimated). Low potential to bio accumulate.



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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 non-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

Waste treatment methods

- Burn in a chemical incinerator equipped with an afterburner and scrubber.
- 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/ARD/RID/IMO/IMDG.

S. No	Agency	UN Number	Proper Shipping name	Hazard Class	Packing Group
Land Transport	ADR/RIC	UN 2811	TOXIC SOLID, ORGANIC, N.O.S.(2-Amino-4-methylpyridine)	6,(6.1)	III
Maritime Transport	IMDG	UN 2811	TOXIC SOLID, ORGANIC, N.O.S.(2-Amino-4-methylpyridine)	6,(6.1)	III
Air Transport	IATA	UN 2811	TOXIC SOLID, ORGANIC, N.O.S.(2-Amino-4-methylpyridine)	6,(6.1)	III
Hazard Label		Toxic			



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Environmental hazards:

- **Marine pollutant:** No.

SECTION 15:

REGULATORY INFORMATION

European Union Information

Classification as per Regulation 67/548/EEC: T; R24/25 - Xi; R38

T - Toxic

Xi- Irritant

Risk Phrases:

- R24/25 : Toxic in contact with skin and if swallowed.
- R38: Irritating to skin.

Safety Phrases:

- S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
- S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Classification as per CLP Regulation 1272/2008:

- **Hazards Class and Category:** *Acute tox oral cat.3; Acute tox dermal Cat.3, skin irritation Cat.2*
- **Hazard Statements:** *H301; H311; H315*
-

Chemical Inventory Lists:	Status
TSCA:	Present
EINECS:	211-780-9
Canada(DSL/NDSL):	Listed/NDSL
Japan:	Not listed
Korea:	Not listed
Australia:	Not listed
China: IECSC	Not listed

US information

Health & Safety Reporting List

- None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

- None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

- None of the chemicals are listed under TSCA Section 12b.



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TSCA Significant New Use Rule

- None of the chemicals in this material have a SNUR under TSCA.

SARA

- Section 302 (RQ)
- None of the chemicals in this material have an RQ.

Section 302 (TPQ)

- None of the chemicals in this product have a TPQ.

Section 313

- No chemicals are reportable under Section 313.

Clean Air Act:

- This material does not contain any hazardous air pollutants.
- This material does not contain any Class 1 Ozone depletors.
- This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

- None of the chemicals in this product are listed as Hazardous Substances under the CWA.
- None of the chemicals in this product are listed as Priority Pollutants under the CWA.
- None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

- None of the chemicals in this product are considered highly hazardous by OSHA.

State Regulations:

- 2-Amino-4-methylpyridine is not present on state lists from CA, PA, MN, MA, FL, or NJ.

SECTION 16: OTHER INFORMATION

Compilation information of safety data sheet

Chemical: 2-Amino-4-Methylpyridine

CAS #: 695-34-1

File Name: 0017 A06 Div.03 sds 2-Amino-4-methylpyridine.

Revision Number: 06

Date of Revision: June 07, 2013

Revision Due Date: May, 2015

(a) A key or legend to aberrations and acronyms used in the safety data sheet;

- PBT = Persistent Bio accumulative and Toxic.
- vPvB = Very Persistent and Very Bio accumulative.
- 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.



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- 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/NDSL= 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, Labeling and Packaging.
- LD / LC = Lethal Doses / Lethal Concentration.
- GHS = Globally Harmonized System.
- ADR = Accord européen 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.

(b) Key Literature reference and sources for data

Biographical reference and data sources

- CLP REG (regulation) (EC) no. 1272/2008, last modification by regulation (EC) no. 790/2009
- DIR 67/548/EWG, last modification by DIR 2009/2/EC
- REG (EC) no. 1907/2006, last modification by REG (EC) Nr. 453/2009

Internet

- RTECS
- ESIS



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Company's Declaration:

Information contained in this SDS is believed to be correct but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. This SDS shall be used as a guide only. Jubilant Life Sciences Limited makes no warranties expressed or implied of the adequacy of this document for any particular purpose.

(End of Safety Data Sheet)
