



Safety Data Sheet

As per Globally Harmonized System (GHS)

Product Identification: 2-Amino-3-methylpyridine 0016Gj Ghs05 Div.3 sds 2-Amino-3-methylpyridine

Date of issue: October 01, 2015

SDS Code : 0016Gj Ghs05 Div.3 sds 2-Amino-3-methylpyridine

Date of Compilation : May 24, 2012

Date of Revision : October 01, 2015

Due Date of Revision: September, 2017

Revision Number : 05

Version Number : 0016Gj Ghs05 Div.3 sds 2-Amino-3-methylpyridine

Supersedes date : October 26, 2012

Supersedes version : 0016A04 Div03 sds 2-Amino-3-methylpyridine

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SECTION 1.: IDENTIFICATION

PRODUCT NAME 2-Amino-3-methylpyridine

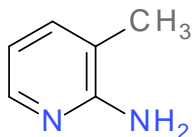
CAS RN 1603-40-3

EC# 216-501-4

SYSTEMATIC NAME Pyridine, 2-amino-3-methyl-

MOLECULAR FORMULA C₆H₈N₂

STRUCTURAL FORMULA



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Emergency telephone:

+91-9997022412 & +91-9359674864

Product Uses:

- 2-Amino-3-methylpyridine is used as an intermediate in the manufacture of active pharmaceutical ingredients.

SECTION 2:

HAZARDS IDENTIFICATION

GHS CLASSIFICATION

Acute Toxicity –Oral: Category 3

Acute Toxicity –Dermal: Category 3

Acute Toxicity –Inhalation: Category 3

Skin Corrosion/Irritation: Category 2

Serious Eye Damage/Eye Irritation: Category 2 A



Hazard Pictogram: GHS 06

Signal Word: Danger!

HAZARD AND PRECAUTIONARY STATEMENTS:

HAZARD STATEMENTS

- H301: Toxic if swallowed.
- H311: Toxic in contact with skin.
- H331: Toxic if inhaled.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.

PRECAUTIONARY STATEMENTS

Prevention

- P270: Do not eat, drink or smoke when using this product.
- P264: Wash hands thoroughly after handling.
- P 280: Wear protective gloves/clothing as specified by the manufacturer/supplier or the competent authority.
- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P271: Use only outdoors or in a well-ventilated area.



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Response

- P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P330: Rinse mouth.
- P302+352: 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.
- 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.
- P311: Call a POISON CENTER or doctor/physician.
- P332+313: If skin irritation occurs: Get medical advice/attention.
- P362: Take off contaminated clothing and wash before reuse.
- 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: If eye irritation persists: Get medical advice/attention.

Storage

- P405: Store locked up.
- P403+233: Store in a well ventilated place. Keep container tightly closed.

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-3-methylpyridine	1603-40-3	216-501-4	> 98 %

SECTION 4: FIRST AID MEASURES

Key symptoms

- **Acute effects:**
 - 2-Amino-3-methylpyridine is irritating to skin, eyes and respiratory system. It is toxic if swallowed, if inhaled and in contact with skin. Follow safe industrial hygiene practices and always wear proper protective equipment.
- **Chronic effects:**
 - To the best of our knowledge, the chronic health effects of this product have not been fully investigated.



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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. INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.

SECTION 5 :

FIRE-FIGHTING MEASURES

Flash Point: > 110⁰C

Flammability: Non Flammable material

Extinguishing media:

- *Appropriate extinguishing media:* Dry chemical powder, carbon dioxide, and alcohol resistant foam. Water spray 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.

Special Protective Equipment and Precautions for Fire Fighter:

- 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 firewater's contaminated with this chemical as per local and federal procedures applicable.
- 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 and cyanide.
- High vapor concentration may result in an explosion hazard.
- Vapors are heavier than air. May travel considerable distance from source and flashback.



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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.
- 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 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.



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- Use in a well ventilated place/Use protective clothing commensurate with exposure levels.

Storage

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

SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Limits Values

Chemical name	STEL (ppm)	NIOSH	ACGIH	OSHA
2-Amino-3-methylpyridine	None available	None available	None available	None available

Exposure Limits (International):

- 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.
The protective gloves to be used must comply with the specifications of EC directives 89/686/EEC and the resultant standard EN374.
- **Eyes:** Safety goggles/ Chemical Safety glasses and Face shield.



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- **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.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

- **Information on basic physical and chemical properties.**

Sr.No.	Parameter	Typical value
1.	Appearance	Light yellow liquid and turns to Crystalline solid at 25°C
2.	Odour	Slightly pungent.
3.	Odour Threshold	Not available
4.	pH	7.5-7.8 (10% aqueous solution)
5.	Melting point	32-34°C
6.	Boiling point	221-222°C
7.	Flash point	110°C
8.	Evaporation rate (n-BuAc=1)	Not available
9.	Explosive limits	Not available



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10.	Vapor pressure	0.09 mmHg
11.	Relative Vapor density (air=1)	3.73
12.	Specific gravity(Water=1)	1.073
13.	Solubility	Soluble in water.
14.	Log Kow (octanol/water)	1.67
15.	Auto-ignition temperature	Not available
16.	Decomposition temperature	Not available
17.	Viscosity	Not available
18.	Molecular Weight	108.14
19.	PKa (@20°C)	Not available
20.	Log Koc	1.75
21.	Flammable Material	No
22.	Oxidizer	No
23.	Corrosive Material	No
24.	Explosive Material	No



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SECTION 10: STABILITY AND REACTIVITY

- **Stability:** Stable at normal conditions of temperature and pressure. At temperature greater than 29⁰C it turns into liquid.
- **Conditions to avoid:** Keep away from High temperature, mechanical shock, incompatible materials, ignition sources, excess heat, and moisture. Avoid hygroscopic conditions, static discharge and uncontrolled exposure to high temperatures.
- **Incompatible chemicals:** Alcohols, oxidizing agents, strong alkalis.
- **Hazardous decomposition:** Thermal decomposition may produce carbon monoxide and oxides of nitrogen, carbon dioxide & nitrogen, Hydrogen chloride, hydrogen cyanide and irritating and toxic fumes.
- **Hazardous Polymerization:** Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

a) Acute toxicity

- 2-Amino-3-methylpyridine is irritating to skin, eyes and respiratory system. Follow safe industrial hygiene practices and always wear proper protective equipment.

RTECS#: US1850000

LD50/LC50:

S.No	Type of Test	Route of Exposure	Species Observed	Dose Data	Toxic Effects	Reference
1.	LD50 - Lethal dose, 50 percent kill	Oral	Rodent - rat	100 mg/kg	Not reported	85JCAE "Prehled Prumyslove Toxikologie; Organicke Latky," Marhold, J., Prague, Czechoslovakia, Avicenum, 1986 Volume (issue)/page/year: - ,841,1986



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2.	LCLo - Lowest published lethal concentration	Inhalation	Rodent - rat	650 ppm/6H	Not reported	85JCAE "Prehled Prumyslove Toxikologie; Organicke Latky," Marhold, J., Prague, Czechoslovakia, Avicenum, 1986 Volume (issue)/page/year: -,841,1986
3.	LD50 - Lethal dose, 50 percent kill	Administration onto the skin	Rodent - guinea pig	200 mg/kg	Not reported	85JCAE "Prehled Prumyslove Toxikologie; Organicke Latky," Marhold, J., Prague, Czechoslovakia, Avicenum, 1986 Volume (issue)/page/year: -,841,1986

b) Skin corrosion/irritation

- Causes skin irritation.

c) Serious eye damage/irritation

- Causes eye irritation.

d) Respiratory or skin sensitization

- Causes irritation to respiratory system.

e) Germ cell Mutagenicity

- No data is available.

f) Carcinogenicity

- Not listed by NTP, IARC and OSHA.
- Not present on the EU CMR list.
- According to information presently available 2-Amino-3-methylpyridine has not been tested for its ability to cause cancer in animals.



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g) Reproductive toxicity

- According to the information presently available has not been tested for its ability to affect reproduction.

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:

- Fish ChV (mg/l) : 0.22 (PBT-Profiler)
- It is expected to be toxic to the aquatic organisms.

Persistence and degradability

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

Bio accumulative potential

- BCF = 2.4
- Log Kow = 0.38

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. These results are estimated and it is recommended that this material should not be disposed into the environment.

Mobility in soil

- Log Koc= 1.75 (estimated). Low sorption.
- Henry's Law Constant: 2.75×10^{-09} atm-m³/mole at 25 degrees. It is non-volatile from aqueous bodies.
- Log Kow= 1.67 (estimated). Low potential to bioaccumulate.



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Other adverse effects.

- **Environment Fate:**

Based on the environmental modeling, this material has a high 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/ADR/RID/IMO/IMDG.

S.No	Agency	UN Number	Proper Shipping name	Hazard Class	Packing Group
Land Transport	ADR/RID	UN 2811	Toxic solids, organic, n.o.s. (2-Amino-3-methylpyridine)	6,(6.1)	III
Maritime Transport	IMDG	UN 2811	Toxic solids, organic, n.o.s. (2-Amino-3-methylpyridine)	6,(6.1)	III
Air Transport	IATA	UN 2811	Toxic solids, organic, n.o.s. (2-Amino-3-methylpyridine)	6,(6.1)	III


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Hazard Label	Toxic	
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Environmental hazards:

- It is expected that this chemical can be toxic to the aquatic organisms.

SECTION 15: REGULATORY INFORMATION

European Union Information

- Classification as per Regulation 67/548/EEC: T; R23/24/25 - Xi; R36/37/38
- T Toxic
- Xi Irritant.

Risk Phrases:

- R23/24/25: Toxic by inhalation, in contact with skin and if swallowed.
- R36/37/38: Irritating to eyes, respiratory system and skin.

Safety Phrases:

- S24/25: Avoid contact with skin and eyes.
- S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S38: In case of insufficient ventilation, wear suitable respiratory equipment.
- 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.
- S46: If swallowed, seek medical advice immediately and show this container or label.

Classification as per CLP Regulation 1272/2008:

- **Hazards Class and Category:** Acute Tox.Oral/Dermal/Inhalation Cat.3, Skin Irrit.cat.2, Eye irrit.cat.2
- **Hazard Statements:** H301; H311; H331; H315; H319

Chemical Inventory Lists:	Status
TSCA:	Present
EINECS:	216-501-4
Canada(DSL/NDSL):	DSL Not Listed/NDSL Listed
Japan:	Not listed
Korea:	Not listed



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Australia:	Not listed
China: IECSC	Not listed

US information

- SARA LISTED: No
- TSCA INVENTORY ITEM: Yes

Canada Regulatory Information

- DSL: No
- NDSL: Yes

SECTION 16: OTHER INFORMATION

Compilation information of safety data sheet

Chemical: 2-Amino-3-methylpyridine

CAS #: 1603-40-3

File Name: 0016Gj Ghs05 Div.3 sds 2-Amino-3-methylpyridine

Revision Number: 05

Date of Issue: October 01, 2015

Revision Due Date: September1, 2017

(a) 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 Programm.
- IARC= International Agency for Research on Cancer.
- EPA=Environmental Protection Agency.
- TSCA= Toxic Substances Control Act.
- CERCLA= Comprehensive Environmental Response, Compensation, and Liability Act.



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- 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 .Authorisation and Restriction of Chemicals.
- CLP = Classification, Labelling and Packaging.
- LD / LC = Lethal Doses / Lethal Concentration.
- GHS = Globally Harmonised System.
- ADR = Accord europeen 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

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)