



## 4-(Aminomethyl)pyridine

### Safety Data Sheet

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

Date of compilation:	: October 27, 2004
File Name	: 0170Gj Ghs07 Div.3 sds 4-(Aminomethyl)pyridine
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# 4-(Aminomethyl)pyridine

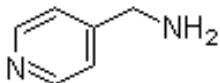
## Safety Data Sheet

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### SECTION 1 : Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Product form : Substance  
Trade name : 4-(Aminomethyl)pyridine  
Chemical name : 4-(Aminomethyl)pyridine  
CAS RN : 3731-53-1  
EC# : 223-092-6  
Molecular Formula : C<sub>6</sub>H<sub>8</sub>N<sub>2</sub>  
Structural Formula:



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

4-(Aminomethyl) pyridine is used as a chemical intermediate in organic synthesis and pharmaceutical drug.

Uses advised against: None

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

**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

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: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance

##### GHS US CLASSIFICATION

Skin corrosion / irritant: Category1C H314  
Serious eye damage / eye irritation: Category 1 H318

#### 2.2 Label elements

According to regulation (EC) 1272/2008

Pictograms:



GHS05 – Corrosive

Signal word:

Danger!

#### HAZARD STATEMENTS

H314: Causes severe skin burns and eye damage.

#### PRECAUTIONARY STATEMENTS

- P264: Wash hands thoroughly after handling.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P260: Do not breathe dust/fume/gas/mist/vapours/spray.
- P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+361+353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P363: Wash contaminated clothing before reuse.



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- P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P310: Immediately call a POISON CENTER or doctor/physician.
- P305+351+338: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
- P405: Store locked up .
- P501: Dispose of contents/container to local/regional/national/international regulations.

### 2.3 Other Hazards

- Substance is not classified as PBT nor as vPvB. For further details see section 12.

### SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical	CAS#	EC#	Purity(GC)	GHS US CLASSIFICATION
4-(Aminomethyl)pyridine	3731-53-1	223-092-6	≥99 %	Skin corrosion / irritant: Category1C H314 Serious eye damage / eye irritation: Category 1 H318

### 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 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. 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 call a poison center if you feel unwell. Rinse mouth. Make victim drink plenty of water and induce vomiting. Seek medical attention

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

##### Acute effects

- 4-(Aminomethyl) pyridine causes severe skin burns and eye damage. . Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

##### Chronic effects

- Repeated or prolonged exposure of this compound is not known to aggravate existing medical conditions.

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

- Note to the Physician: Treat symptomatically.

### SECTION 5 : FIRE-FIGHTING MEASURES

#### 5.1. Extinguishing media

- Appropriate extinguishing media: Dry chemical powder, carbon dioxide, and alcohol resistant foam. Water may also be used. Do not use water jet. Use water spray. Water 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 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).
- Report any run-off of firewater is contaminated with this chemical as per local and federal procedures applicable.

#### 5.3. Advice for firefighters

- Fire fighters must wear Self Contained Breathing Apparatus (SCBA) and full protective clothing. 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, carbon monoxide. Nitrogen oxides, irritating and toxic fumes. High vapor concentration may result in an explosion hazard.
- High vapor concentration may result in an explosion hazard.
- Vapors are heavier than air. May travel considerable distance from source and flashback.

### SECTION 6 : ACCIDENTAL RELEASE MEASURES

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



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- Wear protective clothing, full boots, impervious gloves, safety glasses and Self Contained Breathing Apparatus (SCBA), as may be deemed appropriate.
- Avoid breathing vapors and contact with skin and eyes.
- Shut off leak source if possible.
- Shut off all possible sources of ignition.
- Wipe up.
- Decontaminate all equipment.
- Alert Emergency Responders and tell them location and nature of hazard.
- Clean up all spills immediately following relevant Standard Operating Procedures.

#### 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

#### 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.
- Keep container tightly closed and store locked up.
- Keep only in original container

#### 7.3. Specific end uses(s)

Refer to section 1.

### SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

#### 8.1. Control parameters

##### Exposure Limits Values

Chemical name	NIOSH	ACGIH	OSHA
4-(Aminomethyl)pyridine	Not available	Not available	Not available

Exposure Limits (International): Not available.

#### 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.



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**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.

#### SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

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

Sr.No.	Parameter	Typical value
1)	Appearance	Light to deep yellow oily liquid
2)	Odor	Amine like
3)	Odor Threshold	Not available
4)	pH	10-11
5)	Melting point/Freezing point	-8°C
6)	Boiling Point	228-230 °C
7)	Flash point	108 °C
8)	Evaporation rate (n-BuAc=1)	Not available
9)	Flammability	Non Flammable
10)	Upper/lower flammability or Explosive limits	Not available
11)	Vapor pressure	0.104 hPa at 25°C
12)	Vapor density (air=1)	Not available
13)	Relative density/Bulk density	1.069
14)	Solubility	Highly soluble in water (1000g/L at 20°C)
15)	Partition coefficient : n-(Octonol / water)	-0.38
16)	Auto-ignition temperature	Not available
17)	Decomposition temperature	Not available
18)	Viscosity	Not applicable
19)	Explosive property	No
20)	Oxidizing property	No

#### SECTION 10: STABILITY AND REACTIVITY

- **Stability:** The product is stable at normal temperature and pressure.
- **Conditions to avoid:** Avoid proximity to ignition sources, flames, heat and incompatible substances, vapour generation.
- **Incompatible chemicals:** Strong oxidizing agents, strong acids.
- **Hazardous decomposition products:** Thermal decomposition may produce Nitrogen oxides, carbon monoxide, carbon dioxide, irritating and toxic fumes.
- **Hazardous Polymerization:** Has not been reported.

#### SECTION 11: TOXICOLOGICAL INFORMATION

##### 11.1. Information on toxicological effects

###### a) Acute toxicity

4-(Aminomethyl)pyridine causes severe skin burns and eye damage. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.

###### TOXICITY:

RTECS# : Not available.  
LD50 Oral Rat : >10690 mg/kg (Rat)

b) Skin corrosion/irritation : Causes severe skin burns.

c) Serious eye damage/irritation : Causes eye damage.



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- d) Respiratory or skin sensitization : No data available
- e) Germ cell Mutagenicity : No data is available.
- f) Carcinogenicity : No data is available.
- 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

##### 12.1 Toxicity

###### Ecotoxicity

- LC50 for freshwater fish (96hr): 760 mg/L(Estimated)
- EC10, LC10 or NOEC for freshwater fish: 102 mg/L(Estimated)
- EC50/LC50 for freshwater invertebrates (48hr): 68 mg/L(Estimated)
- EC10, LC10 or NOEC for freshwater invertebrates: 4.3 mg/L(Estimated)
- EC50/LC50 for freshwater algae: 98 mg/L(Estimated)
- EC10, LC10 or NOEC for freshwater algae: 26 mg/L(Estimated)

4-(Aminomethyl)pyridine is not chronically toxic to fish.

##### 12.2 Persistence and degradability

- 4-(Aminomethyl)pyridine is estimated to be readily biodegradable.

##### 12.3 Bio accumulative potential

- BCF = 3.162
- Log Kow = -0.38
- 4-(Aminomethyl)pyridine is not expected to bio accumulate in the food chain because it does not exceed the BCF criteria.

##### 12.4 Mobility in soil

- Koc= 7.404 L/kg (from experimental log Kow)
- Henry's Law Constant: 8.01E-010 atm/m<sup>3</sup> mole at 25 degrees.
- Log Kow= -0.38

##### 12.5 Results of PBT and vPvB assessment

- No additional information available

##### 12.6 Other adverse effects

- Environmental fate  
Based on the environmental modeling, 4-(Aminomethyl)pyridine is estimated to be readily biodegradable and is not expected to bio accumulate in the food chain. 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 method

- 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




In accordance with ADR / RID / IMDG / IATA / AND

ADR	IMDG	IATA
<b>14.1. UN number</b>		
2735	2735	2735

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<b>14.2. UN proper shipping name</b>		
<b>Transport document description</b>		
AMINE, LIQUID, CORROSIVE, N.O.S , N.O.S.,8;II	AMINE, LIQUID, CORROSIVE, N.O.S , N.O.S.,8; II	AMINE, LIQUID, CORROSIVE, N.O.S , N.O.S.,8;II
<b>14.3. Transport hazard class(es)</b>		
8	8	8
		
<b>14.4. Packing group</b>		
II	II	II
<b>14.5. Environmental hazards</b>		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No
No supplementary information available		

### **Packing Group: II**

Materials other than those meeting Packing Group I criteria that cause full thickness destruction of intact skin tissue within an observation period of up to 14 days starting after the exposure time of more than three minutes but not more than 60 minutes.

## SECTION 15: REGULATORY INFORMATION

### European Union Information

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

Hazards Class and Category: Skin corr. Cat. Category 1C

Chemical Inventory Lists:	Status
TSCA	Listed (Active)
Canada (DSL/NDSL)	Listed/NDSL
Korea	Not Listed
China: IECSC	Not Listed
EINECS	Listed
Japan:	Listed (5-3701)
Australia:	Not Listed

### US information

#### CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

4-(Aminomethyl)pyridine is not listed

**SARA 302/304** : 4-(Aminomethyl)pyridine is not listed

**SARA 311/312** : See section 2 for more information

**California Prop. 65**: 4-(Aminomethyl)pyridine is not listed

**CAA (Clean Air Act)**: 4-(Aminomethyl)pyridine is not listed

**CWA (Clean Water Act)**: 4-(Aminomethyl)pyridine is not listed

### EU Information

**Water hazard class (WGK)**: WGK 3 (Severe hazards to water)

**Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006**: 4-(Aminomethyl)pyridine is not listed

## SECTION 16: OTHER INFORMATION

Compilation information of safety data sheet



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### (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.  
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

#### Full text of H- Statements:

H314	Causes severe skin burns and eye damage.
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#### 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*