



## N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride

### Safety Data Sheet

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

Date of Compilation	: August 11, 2010
Date of Revision	: March 29, 2024
Due Date of Revision	: February, 2027
Revision Number	: 09
Version Number	: 0604Gj Ghs09 Div.3 N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride
Supersedes date	: February 22, 2021
Supersedes version	: 0604Gj Ghs8 Div.3 N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride

# N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride

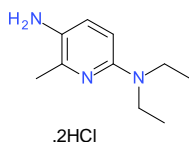
## Safety Data Sheet

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

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

#### 1.1. Product identifier

PRODUCT NAME : N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride  
 CAS RN : 168091-36-9  
 EC# : 807-557-6  
 SYNONYMS : 2,5-Pyridinediamine, N2,N2-diethyl-6-methyl-, hydrochloride, N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride, 3-amino-6-diethylamino-2-methyl pyridine, DEMP.  
 MOLECULAR FORMULA : C<sub>10</sub>H<sub>17</sub>N<sub>3</sub>.2HCl  
 STRUCTURAL FORMULA



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

##### 1.2.1. Relevant identified uses

N2, N2-diethyl-6-methylpyridine-2,5-diamine dihydrochloride is used in electrochemical, dyes and ink.

**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

**HEAD OFFICE:** Jubilant Ingrevia Limited, Plot 1-A, Sector 16-A, Institutional Area, Noida, Uttar Pradesh, 201301 - India

**T: FACTORY & REGISTERED OFFICE:** T +91-5924-252353 to 252360 Contact Department-Safety: Ext. 7424

**HEAD OFFICE:** T +91-120-4361000 E-mail: [support@jubl.com](mailto:support@jubl.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

Acute Toxicity-Oral (Category 4)

H302

Harmful if swallowed.

Aquatic chronic (Category 2)

H411

Toxic to aquatic life with long lasting effects.

**Other hazards:** None

#### 2.2. Label Elements

**Hazard Pictogram:** GHS 07, GHS 09



GHS 07: Exclamation Mark



GHS 09: Environmental Hazard

**Signal Word:** Warning!

#### HAZARD AND PRECAUTIONARY STATEMENTS:

##### HAZARD STATEMENTS

- H302: Harmful if swallowed.
- H411: Toxic to aquatic life with long lasting effects..

##### PRECAUTIONARY STATEMENTS

- P264: Wash hands thoroughly after handling.



# N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride

## Safety Data Sheet

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

- P270: Do not eat, drink or smoke when using this product.
- P273: Avoid release to the environment.
- P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- H330: Rinse mouth.
- H391: Collect spillage.
- P501: Dispose of contents/container to local/regional/national/international regulations.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical	CAS #	EINECS No.	Purity
N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride	168091-36-9	807-557-6	98%

### SECTION 4: FIRST AID MEASURES

#### Description of first aid measures

##### Key symptoms:

##### Acute effects

- It is harmful if swallowed.

##### Chronic effects

- To the best of our knowledge, the chronic health effects of this product 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:** Remove and isolate contaminated clothing and shoes. Wash thoroughly with water for at least 15 minutes. Wash contaminated clothes before reuse. Seek immediate medical attention.
- **Inhalation:** Move victim to fresh air. If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband Administer oxygen if breathing is difficult. Seek medical attention if respiration problems do not improve.
- **Ingestion:** If swallowed call a poison centre if you feel unwell. Rinse mouth. Lower the head so that the vomit will not re-enter 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

#### Extinguishing media

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

- May burn but not ignite readily.
- Containers may explode when heated.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

- 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.



# N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride

## Safety Data Sheet

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

- Shut off all possible sources of ignition and increase ventilation.
- Stop leaks if possible.
- Clean up all spills immediately following relevant Standard Operating Procedures.
- Inform authorities in event of contamination of any public sewers, drains or water bodies.
- Prevent, by any means available, spillage from entering drains or water and watercourses.
- Collect recoverable product into labelled 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.

### SECTION 7: HANDLING AND STORAGE

#### Precautions for safe handling

- Do not breathe dust 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 lock up.
- Store at ambient temperature in a dry and well-ventilated place.
- Store away from incompatible materials.

### SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Control parameters

- **Exposure Limits Values**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride	Not established	Not established	Not established

#### 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.
- **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.**



## N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride

### Safety Data Sheet

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

Sr.No.	Parameter	Typical value
1.	Appearance	Yellow to Brown Colour Powder
2.	Odor	Odorless
3.	Odor Threshold	Not available
4.	Molecular weight	252.18
5.	pH	Acidic
6.	Melting point/Freezing point	Not available
7.	Initial Boiling point and boiling range	Not available
8.	Flash point	Not available
9.	Evaporation rate (n-BuAc=1)	Not available
10.	Flammability (Solid, gas)	Non Flammable
11.	Upper/lower flammability or Explosive limits	Not available
12.	Vapor pressure	Not available
13.	Vapor density (air=1)	Not available
14.	Relative density	Not available
15.	Solubility	Soluble in water. Sparingly soluble in Methanol
16.	Log Pow, partition coefficient ( Octonol /water)	2.24 (Free base)
17.	pKa (@25 °C)	Not available
18.	Log Koc	2.25 (Free base)
19.	Auto-ignition temperature	Not available
20.	Decomposition temperature	Not available
21.	Viscosity	Not available
22.	Explosive property	No
23.	Oxidizing property	No
24.	Corrosive material	No

#### SECTION 10: STABILITY AND REACTIVITY

- **Stability:** Stable under normal temperature and pressures.
- **Conditions to avoid:** Keep away from High temperature, sparks, moist condition, mechanical shock, incompatible materials, ignition sources, excess heat.
- **Incompatible chemicals:** Strong oxidizing agents and water.
- **Hazardous decomposition products:** Thermal decomposition may produce carbon monoxide and oxides of nitrogen, carbon dioxide, Ammonia, Hydrochloric acid, irritating and toxic fumes.
- **Hazardous Polymerization:** Not reported.

#### SECTION 11: TOXICOLOGICAL INFORMATION

##### Information on toxicological effects

Acute toxicity	: It is harmful if swallowed.
Oral rat LD <sub>50</sub>	: 615.33 mg/kg (free base)
Skin Corrosion/ Irritation	: No data available
Serious Eye Damage/Irritation	: No data available
Respiratory or Skin Sensitization	: No data available
Germ Cell Mutagenicity	: No data available
Carcinogenicity	: Not listed by NTP, IARC and OSHA. Not present on the EU CMR list.



# N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride

## Safety Data Sheet

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

Reproductive Toxicity	: No data available.
STOT-Single Exposure	: No data available
STOT- Repeated Exposure	: No data available
Aspiration hazard	: No data available

### SECTION 12: ECOLOGICAL INFORMATION

#### Toxicity

N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride (168091-36-9)	
Fish ChV	0.053 (very toxic to aquatic environment)
Fathead minnow LC <sub>50</sub> (96 hr)	27.55 mg/L (Predicted Fathead minnow LC50 (96 hr) from Consensus method) (Free base)
Daphnia magna LC <sub>50</sub> (48 hr)	2.65 mg/L (Predicted Daphnia magna LC50 (48 hr) from Consensus method) (Free base)

#### Persistence and degradability

N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride (168091-36-9)	
Persistence and degradability	It is estimated to be persistent in the environment. Not readily biodegradable

#### Bioaccumulative potential

N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride (168091-36-9)	
Bioconcentration factor (BCF)	13.89 (Free base)
Log Kow	2.24 (Free base)

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 relative to its surroundings

#### Mobility in soil

N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride (168091-36-9)	
Log Koc	2.25 (estimated). Low Sorption.
Henry's Law Constant	7.71E-011 atm-m <sup>3</sup> /mole at 25 degrees. It is expected to be non-volatile from aqueous phase.
Log Kow	2.24 (estimated). Low potential to bioaccumulation.

#### Other adverse effects

Other information : 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

#### Waste disposal recommendations







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.

# N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride

## Safety Data Sheet

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

### SECTION 14: Transport information

ADR	IMDG	IATA
<b>14.1. UN number</b>		
3077	3077	3077
<b>14.2. UN proper shipping name</b>		
Environmentally Hazardous Substance, Solid, n.o.s ( N2,N2-Diethyl-6-methylpyridine-2,5-diamine dihydrochloride)	Environmentally Hazardous Substance, Solid, n.o.s ( N2,N2-Diethyl-6-methylpyridine-2,5-diamine dihydrochloride)	Environmentally Hazardous Substance, Solid, n.o.s ( N2,N2-Diethyl-6-methylpyridine-2,5-diamine dihydrochloride)
<b>14.3. Transport hazard class(es)</b>		
9	9	9
 	 	 
<b>14.4. Packing group</b>		
III	III	III
<b>14.5. Environmental hazards</b>		
Dangerous for the environment : yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

### SECTION 15: REGULATORY INFORMATION

- European Union Information**

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

- Hazards Class and Category:** Acute Toxicity-Oral Cat 4, Aquatic Chronic Cat 2.
- Hazard Statements:** H302, H411.

Chemical Inventory Lists:	Status
TSCA:	Not Listed
EC Inventory:	Listed
Canada(DSL/NDSL):	Not Listed
Japan:	Not listed
Korea:	Not listed
Australia:	Not Listed
China: IECSC	Listed
Philippines	Not Listed
Taiwan	Not Listed

#### US information

**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):** N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride is not listed

**SARA 302/304 :** N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride is not listed

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

**California Prop. 65:** N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride is not listed

**CAA (Clean Air Act):** N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride is not listed

**CWA (Clean Water Act):** N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride is not listed

#### EU Information



# N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride

## Safety Data Sheet

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

**Water hazard class (WGK):** Not classified

**Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006:** N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride is not listed

### SECTION 16: OTHER INFORMATION

#### a) Compilation information of safety data sheet

Date of compilation : August 11, 2010  
Chemical : **N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride**  
CAS # : 168091-36-9  
File Name : 0604Gj Ghs09 Div.3 N2,N2-Diethyl-6-methyl-2,5-pyridinediamine Dihydrochloride  
Revision Number : 09  
Date of Revision : March 29, 2024  
Revision Due Date : February, 2027  
Supersedes date : February 22, 2021

#### 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/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 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.

#### c) 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.

##### 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)