Safety Data Sheet

As per federal final rule of hazard communication revised on 2012 (HazCom 2012)

Product Identification: 2,6-Dichloropyridine 0037Am Ghs11 Div.5 sds 2,6-Dichloropyridine

Date of issue: February 11, 2021

SDS Code	: 0037Am Ghs11 Div.5 sds 2,6-Dichloropyridine
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SECTION 1.: IDENTIFICATION

PRODUCT NAME 2,6-Dichloropyridine

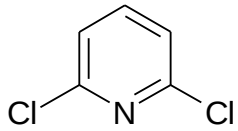
CAS RN 2402-78-0

EC# 219-282-3

SYSTEMATIC NAME 2,6-Dichloropyridine ; Pyridine, 2,6-dichloro-

MOLECULAR FORMULA $C_5H_3Cl_2N$

STRUCTURAL FORMULA



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International: +1-813-248-0585
India: 000-800-100-4086
Brazil: 0-800-591-6042
Mexico: 01-800-099-0731
China: 400-120-0751

Product Uses:

- 2,6-Dichloropyridine is used as an intermediate in the synthesis of antifungal agents Liranaftate and herbicide like Picolinafan.

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION
Acute toxicity – Oral: Category 3
Eye irritation: Category 2A
Skin Corrosion/irritation: Category 2

Hazard Pictogram: GHS 06
Signal Word: Danger!

HAZARD AND PRECAUTIONARY STATEMENTS:

HAZARD STATEMENTS

- H301: Toxic if swallowed.
- H319: Causes serious eye irritation.
- H315: Causes skin irritation.

PRECAUTIONARY STATEMENTS
Prevention

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

Response

- P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P330: Rinse mouth.
- P302+P352: IF ON SKIN: Wash with soap and water.
- P332+P313: If skin irritation occurs: Get medical advice/attention.
- P305+P351+P338: 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.

Disposal

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

SECTION 3: COMPOSITION / INFORMATION ON INGERDIENTS

Sr.No.	Chemical	CAS #	EC#	Purity
1	2,6-Dichloropyridine	2402-78-0	219-282	99 % w/w

SECTION 4: FIRST AID MEASURES

Key symptoms

- ***Acute effects:***
  2,6-Dichloro pyridine is severely irritating to eyes and skin. It is toxic if swallowed. It causes irritation to tissues of the mucous membranes and upper respiratory tract.
- ***Chronic effects:***
  To the best of our knowledge, the chronic health effects of this product have not been fully investigated.

FIRST AID:

- **Eyes**: Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 15-20 minutes, while holding the eyelid(s) open. Remove contact lenses if easy to do so. Continue rinsing. If irritation persists, seek medical attention.
- **Skin:** Immediately take off all contaminated clothing. Quickly and gently blot or brush away excess chemical. Wash thoroughly with lukewarm, gently flowing water and non-abrasive soap for 15-20 minutes. Wash contaminated clothes before reuse. If irritation persists, obtain medical advice.
- **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: 110 °C (230.0 °F) **Flammability:** Non Flammable material

Extinguishing media:

- *Appropriate extinguishing media*: Dry chemical powder, carbon dioxide, and alcohol resistant foam. Water may also be used. 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) 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, hydrogen chloride, carbon monoxide and cyanide.
- High vapor concentration may result in an explosion hazard.
- When heated to decomposition, it emits highly toxic fumes of Sulfur.
- Vapors are heavier than air. May travel considerable distance from source and flashback.

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

Storage

- Store at ambient temperature in a dry and well ventilated place.
- Store away from incompatible materials.
- 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
2,6-Dichloropyridine	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.
- **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

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

Sr.No.	Parameter	Typical value
1.	Appearance	White to pink Crystalline material
2.	Odor	Characteristic Odor.
3.	Odor Threshold	Not available
4.	pH	6-7
5.	Melting point/Freezing point	86 – 89^{o}C
6.	Boiling Point	211^{o}C @ 760.00mmHg
7.	Flash point	110 ^{o}C (230.0 ^{o}F)
8.	Evaporation rate (n-BuAc=1)	Not available

9.	Flammability	Non Flammable
10.	Upper/lower flammability or Explosive limits	Not available
11.	Vapor pressure	70 mm Hg @ 132ºC
12.	Vapor density (air=1)	Not available
13.	Relative density	Not available
14.	Solubility	Insoluble in water
15.	Partition coefficient : n-(Octonol / water)	2.2
16.	Auto-ignition temperature	>700 ºC (>1,292.00 ºF)
17.	Decomposition temperature	Not available
18.	Viscosity	Not available
19.	Explosive property	No
20.	Oxidizing property	No

SECTION 10: STABILITY AND REACTIVITY

- **Stability:** Stable at normal conditions of temperature and pressure**.**
- **Conditions to avoid:** Keep away from High temperature, mechanical shock, incompatible materials, ignition sources, excess heat, and moisture. Avoid static discharge and uncontrolled exposure to high temperatures. Store in tightly closed containers in a cool, well ventilated area.
- **Incompatible chemicals:** Mineral acids, aliphatic and aromatic amines, azo and diazo compounds and hydrazines, caustics, cyanides, mercaptans, other organic sulfides, nitrides, organic peroxides and hydroperoxides, strong oxidizing agents, strong reducing agents.
- **Hazardous decomposition**: Thermal decomposition may produce nitrogen oxides Carbon dioxide, carbon monoxide, Hydrogen chloride and nitrogen.
- **Hazardous Polymerization**: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

a) Acute toxicity

- 2,6-Dichloro pyridine is severely irritating to eyes and skin. It is toxic if swallowed. It causes irritation to tissues of the mucous membranes and upper respiratory tract.
- **RTECS#**: US8400000

- LD_{50}/LC_{L0}

Organism	Test type	Route	Reported dose	Effect
Mouse	LD_{50}	Intraperitoneal	115 mg/kg	Behavioral: Somnolence (General Depressed Activity) Behavioral:Antipsychotic Liver: Fatty Liver Degeration
Mouse	LD_{50}	Oral	176 mg/kg	Behavioral: Somnolence (General Depressed Activity**)**

b) Skin corrosion/irritation

- Causes skin irritation.

c) Serious eye damage/irritation

- Causes serious eye irritation.

d) Respiratory or skin sensitization

- No data is available.

e) Germ cell Mutagenicity

- Non- mutagenic.

f) Carcinogenicity

- Not listed by NTP, IARC and OSHA.
- Not present on the EU CMR list.
- According to information presently available 2,6-Dichloropyridine is not found to be carcinogenic.

g) Reproductive toxicity

- According to the information presently available 2,6-Dichloropyridine 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:

- The Ecotoxicity data is not available.
- Fish ChV (mg/l) : 12 (expected).
- Based on the estimated value it is expected to be chronically non-toxic to Aquatic Organisms.

Persistence and degradability

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

Bio accumulative potential

- BCF = 9
- Log Kow = 2.2

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.

Mobility in soil

- Log Koc= 1.937(estimated). Low sorption.
- Henry's Law Constant= 1.5 X 10^{-02} atm/m^3 mole at 25 degrees. It is volatile from aqueous bodies.
- Log Kow= 2.2 (estimated). Low potential to bio accumulate.

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 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

- 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	ADR/RIC	UN 2811	Toxic Solid, organic, n.o.s. (2,6-Dichloropyridine)	6,(6.1)	III
Maritime Transport	IMDG	UN 2811	TOXIC SOLID, ORGANIC, N.O.S. (2,6-Dichloropyridine)	6,(6.1)	III
Air Transport	IATA	UN 2811	Toxic Solid, Organic, n.o.s. (2,6-Dichloropyridine)	6,(6.1)	III
Hazard Label		**Toxic, 6, (6.1)**			

Environmental hazards:

- Marine pollutant: No

SECTION 15: REGULATORY INFORMATION

Classification as per CLP Regulation 1272/2008:

- **Hazards Class and Category**: *Acute Tox Oral cat.3; Skin irrit.cat 2, Eye irrit.cat.2*
- **Hazard Statements:** H301; H315; H319

Chemical Inventory Lists:	Status
TSCA:	Present
EINECS:	219-282-3
Canada(DSL/NDSL):	Listed/NDSL
Japan:	5-3688
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.
- **TSCA Significant New Use Rule**
  None of the chemicals in this material have a SNUR under TSCA.
- **CERCLA Hazardous Substances and corresponding RQs**
  None of the chemicals in this material have an RQ.
- **SARA Section 302 Extremely Hazardous Substances**
  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**
  CAS# 2402-78-0 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
- **California Prop 65**
  California No Significant Risk Level: None of the chemicals in this product are listed.
- **WGK (Water Danger/Protection)**
  CAS# 2402-78-0: No information available.
- **Canada - DSL/NDSL**
  CAS# 2402-78-0 is listed on Canada's NDSL List.

SECTION 16: OTHER INFORMATION

Compilation information of safety data sheet
Chemical: 2,6-Dichloropyridine
CAS #: 2402-78-0
File Name: 0037Am Ghs11 Div.5 sds 2,6-Dichloropyridine
Revision Number: 11
Date of Issue of SDS: February 11, 2021
Revision Due Date: January, 2024

(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.
- WHIMS= Workplace Hazardous Materials Information System.
- DSL/NDSL= Domestic/Non-Domestic Substances List.
- 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.
- IMDG-Code = International Maritime Code for Dangerous Goods.
- 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

- Globally Harmonized System of Classification and Labelling of Chemicals.
- CLP REG (regulation) (EC) no. 1272/2008, last modification by regulation (EC) no. 790/2009
- REG (EC) no. 1907/2006, last modification by REG (EC) Nr. 830/2015
- RTECS

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)