



Safety Data Sheet

As per Globally Harmonized System (GHS)

Product Identification: 2-Chloro-3-nitropyridine

0749Gj Ghs06 Div.3 sds 2-Chloro-3-nitropyridine

Date of issue: March 07, 2024

SDS Code : 0749Gj Ghs06 Div.3 sds 2-Chloro-3-nitropyridine

Date of Compilation : February 13, 2014

Date of Revision : March 07, 2024

Due Date of Revision : February, 2027

Revision Number : 06

Version Number : 0749Gj Ghs06 Div.3 sds 2-Chloro-3-nitropyridine

Supersedes date : 0749Gj Ghs05 Div.3 sds 2-Chloro-3-nitropyridine

Supersedes version : January 16, 2024



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SECTION 1: IDENTIFICATION

PRODUCT NAME 2-Chloro-3-nitropyridine

CAS RN 5470-18-8

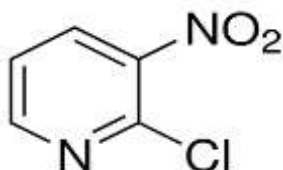
EC# 226-799-8

SYNONYM 3-Nitro-2-chloropyridine; 2-chloro-3-nitro-pyridin; Pyridine, 2-chloro-3-nitro-

SYSTEMATIC NAME 2-Chloro-3-nitropyridine

MOLECULAR FORMULA C₅H₃ClN₂O₂

STRUCTURAL FORMULA



FACTORY & REGISTERED OFFICE:

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HEAD OFFICE:

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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

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For ALL other emergencies call Emergency Control Room Gajraula at 99970 22412

Product Uses:

- 2-Chloro-3-nitropyridine is an organic intermediate and used in pharmaceutical industries and in research and development work.

SECTION 2:

HAZARDS IDENTIFICATION

GHS CLASSIFICATION

Acute Toxicity –Oral: Category 4

Skin corrosion / irritant: Category 2

Serious eye damage/eye irritation: Category 2A

Specific target organ toxicity: Category 3

(After single exposure)



Hazard Pictogram: GHS 07

Signal Word: Warning!

HAZARD AND PRECAUTIONARY STATEMENTS:

HAZARD STATEMENTS

- H302: Harmful if swallowed.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H335: May cause respiratory 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.
- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P271: Use only outdoors or in a well-ventilated area.

Response

- P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P330: Rinse mouth.
- P302+352: IF ON SKIN: Wash with plenty of soap and water.
- P332+313: If skin irritation occurs: Get medical advice/attention.
- P362: Take off contaminated clothing and wash before reuse.



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- 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+P313: If eye irritation persists: Get medical advice attention.
- P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P312: Call a POISON CENTER or doctor/physician if you feel unwell.

Storage

- P403+233: Store in a well ventilated place. Keep container tightly closed.
- 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-Chloro-3-nitropyridine	5470-18-8	226-799-8	≥ 99 %

SECTION 4: FIRST AID MEASURES

Key symptoms

- **Acute effects:**
It is harmful if swallowed. It causes skin irritating and serious eyes irritation. It may cause respiratory irritation. It is irritating to mucous membranes and upper respiratory tract. It may cause drowsiness or dizziness. Follow safe industrial hygiene practices and always wear proper protective equipment when handling this compound.
- **Chronic effects:**
Repeated or prolonged exposure to this compound is not known to aggravate existing medical conditions.

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:** If the victim is not breathing, perform mouth-to-mouth resuscitation. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, oxygen can be administered. Seek medical attention if respiration problems do not improve.
- **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



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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: 185 °C

Flammability: Non flammable

Extinguishing media:

- *Appropriate extinguishing media:* Dry chemical powder, carbon dioxide, and alcohol resistant foam. Water may be in effective but may 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, carbon di-oxide, carbon monoxide, Hydrogen cyanide, Hydrogen chloride and irritating and toxic fumes.
- 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

Minor Spills

- Clean up all spills immediately following relevant Standard Operating Procedures.
- Avoid breathing dust 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.



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- 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 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 a cool, dry, well ventilated and in tightly closed container.
- 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	ACGIH TLV	OSHA PEL	NIOSH
2-Chloro-3-nitropyridine	Not available	Not available	Not available

Exposure Limits (International):

- Not available

Exposure controls



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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.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

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

Sr.No.	Parameter	Typical value
1.	Appearance	Yellow crystalline powder
2.	Odor	Characteristic
3.	Odor Threshold	Not available
4.	pH	Not available
5.	Melting point/Freezing point	100 to103°C
6.	Boiling Point	260-277 °C at 760 mmHg
7.	Flash point	185 °C



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8.	Evaporation rate (n-BuAc=1)	Not available
9.	Flammability	Non Flammable
10.	Upper/lower flammability or Explosive limits	Not available
11.	Vapor pressure	0.019999995529652 mmHg at 25°C
12.	Vapor density (air=1)	Not available
13.	Relative density	1.489 g/cm ³
14.	Solubility	In soluble in water
15.	Partition coefficient : n-(Octonol / water)	1.312(Estimated)
16.	Auto-ignition temperature	485 °C
17.	Decomposition temperature	Not available
18.	Viscosity	Not available
19.	Explosive property	Not available
20.	Oxidizing property	Not available

SECTION 10: STABILITY AND REACTIVITY

- **Stability:** Stable under recommended storage conditions of temperature and pressure. When not in use, tightly seal the container and store in a dry, cool place.
- **Conditions to avoid:** Keep away from High temperature, mechanical shock, incompatible materials, ignition sources, and moisture. Store in tightly closed containers in a cool, well ventilated and dry area, away from heat, flame and sparks.
- **Incompatible chemicals:** Oxidizing Agents.
- **Hazardous decomposition products:** Thermal decomposition may produce carbon monoxide and oxides of nitrogen, carbon dioxide, Hydrogen chloride and, irritating and toxic fumes.
- **Hazardous Polymerization:** Has not been reported.

SECTION 11: TOXICOLOGICAL INFORMATION



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a) Acute toxicity

- It is harmful if swallowed. It causes skin irritating and serious eyes irritation. It may cause respiratory irritation. It is irritating to mucous membranes and upper respiratory tract. It may cause drowsiness or dizziness.

RTECS#: Unlisted

LD50: Rat 1550 mg/kg.

Oral rat LD50: 325.70 mg/kg (Predicted Oral rat LD50 from Consensus method)

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

- No data is available.

f) Carcinogenicity

- No data available

g) Reproductive toxicity

- No data available.

h) STOT-single exposure

- May cause respiratory irritation.

i) STOT-repeated exposure

- No data available.

j) Aspiration Hazards

- No data available.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity :

Ecotoxicity (Estimated)

- Fish ChV:1.2(mg/l).
2-Chloro-3-nitropyridine is chronically toxic to fish.

Persistence and degradability

- 2-Chloro-3-nitropyridine is estimated to be persistent in the environment.

Bio accumulative potential

- BCF=3.2 (Estimated).
- Log Kow = 1.312



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- 2-Chloro-3-nitropyridine is not expected to bioaccumulate in the food chain because it does not exceed the BCF criteria.

Mobility in soil

- Log = 180 (Estimated).
- Henry's Law Constant: 0.0000013 atm/m³ mole at 25 degrees (Estimated).
- Log Kow = 1.312

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 and persistent in the environment and is chronically toxic to fish. It has 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

- 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 Non Hazardous for transport by Air/Rail/Road and Sea and thus Not regulated by IATA/ICAO/ARD/RID/IMO/IMDG.

Environmental hazards:

- Marine pollutant: No

SECTION 15:

REGULATORY INFORMATION

Classification as per CLP Regulation 1272/2008:

- **Hazards Class and Category:** Acute tox oral Cat 4 ; Skin Irrit Cat. 2 ;Eye Irrit Cat 2 ; STOT SE Cat. 3
- **Hazard Statements:** H302; H315; H319; H335

Chemical Inventory Lists:	Status
TSCA:	Present
EINECS:	226-799-8
Canada(DSL/NDSL):	Present/NDSL
Japan:	Not listed
Korea:	KE-05791
Australia:	Not listed



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China: IECSC	Not Listed
Taiwan	Listed

US information

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act): 2-Chloro-3-nitropyridine not listed

SARA 302/304 : 2-Chloro-3-nitropyridine not listed

SARA 311/312 : See section 2, for more information.

California Prop. 65: 2-Chloro-3-nitropyridine not listed

CAA (Clean Air Act): 2-Chloro-3-nitropyridine not listed

CWA (Clean Water Act): 2-Chloro-3-nitropyridine not listed

EU Information

Water hazard class (WGK) 3

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006: 2-Chloro-3-nitropyridine not listed

SECTION 16: OTHER INFORMATION

Compilation information of safety data sheet

Chemical: 2-Chloro-3-nitropyridine

CAS #: 5470-18-8

File Name: 0749Gj Ghs06 Div.3 sds 2-Chloro-3-nitropyridine

Revision Number: 06

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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.



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- 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 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

- 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 Ingrevia Limited makes no warranties expressed or implied of the adequacy of this document for any particular purpose.

(End of Safety Data Sheet)