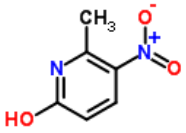
Date of Compilation	: October 22, 2016
Date of Revision	: April 02, 2024
Due Date of Revision	: March, 2027
File Name	: 0797Gj Ghs04 Div.5 sds 6-Methyl-5-nitropyridin-2-ol
Version Number	: 04
Supersedes date	: March 01, 2021
Supersedes version	: 0797Gj Ghs03 Div.5 sds 6-Methyl-5-nitropyridin-2-ol

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

1.1. Product identifier

PRODUCT NAME	: 6-Methyl-5-nitropyridin-2-ol
CAS RN	: 28489-45-4
EC#	: Not Applicable
SYNONYMS	: 2-Hydroxy-5-nitro-6-pinacoline; 2-Methyl-3-nitro-6-pyridinol; 6-Hydroxy-3-nitro-2-picoline.
TECHNICAL NAME	: 2-Hydroxy-6-methyl-5-nitropyridine
MOLECULAR FORMULA	: $C_6H_6N_2O_3$
STRUCTURAL FORMULA	



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

1.2.1. Relevant identified uses
6-Methyl-5-nitropyridin-2-ol is used as an intermediate.

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.
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 - www.jubilantingrevia.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

Skin Corrosion/irritation: Category 2	H315	Causes skin irritation.
Eye damage/irritation: Category 2A	H319	Causes serious eye irritation.
Specific Target organ Toxicity: Category 3 (Single Exposure)	H335	May cause respiratory irritation.

2.2. Label Elements

Hazard Pictogram: GHS 07

Signal Word: Warning!

GHS 07

HAZARD AND PRECAUTIONARY STATEMENTS:
HAZARD STATEMENTS

- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H335: May cause respiratory irritation.

PRECAUTIONARY STATEMENTS

- P264: Wash hands, eyes and face thoroughly after handling.
- P280: Wear protective gloves/clothing and eye/face protection.
- P271: Use only outdoors or in a well-ventilated area.
- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
- P332 + P313: If skin irritation occurs: Get medical advice/attention.
- P362: Take off contaminated clothing and wash before reuse.
- P305 + P351 + P338: IF IN EYES, Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rising.
- P312: Call a POISON CENTER/doctor/physician if you feel unwell.
- 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.
- P403+P233: Store in a well-ventilated place. Keep container tightly closed.
- P405: Store locked up.
- P501: Dispose of contents/container to local/regional/national/international regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical	CAS #	EC#	Purity
6-Methyl-5-nitropyridin-2-ol	28489-45-4	Not Applicable	99%

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Key symptoms

Acute effects:

- 6-Methyl-5-nitropyridin-2-ol is irritating to skin, eyes and may be harmful by ingestion and inhalation. Material is irritating to 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

- **Eye Contact:** Check for and remove any contact lenses. Immediately flush eyes with clean, running water for at least 15 minutes while keeping eyes open. Cool water may be used. Seek medical attention.
- **Skin Contact:** After contact with skin, wash with generous quantities of running water. Gently and thoroughly wash affected area with running water and nonabrasive soap. Cool water may be used. Cover the affected area with emollient. Seek medical attention. Wash any contaminated clothing prior to reusing.
- **Inhalation:** Remove the victim from the source of exposure to fresh, uncontaminated air. If victim's breathing is difficult, administer oxygen. Seek medical attention.
- **Ingestion:** Do NOT induce vomiting. Give water to victim to drink. Seek medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

- *Appropriate extinguishing media*: Carbon dioxide, dry chemical powder, alcohol or polymer foam.

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) 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.

5.3. Unusual fire and explosion hazard

- Vapors are heavier than air. May travel considerable distance from source and flashback.
- The substance may emit toxic fumes under fire conditions.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- Wear Appropriate respirator, impervious boots and heavy rubber (or otherwise impervious) gloves.
- Scoop up solid material or absorb liquid material and place into appropriate container.
- Ventilate area and wash affected spill area after pickup is complete.

- Wash skin immediately with plenty of water.
- Place solid or absorbed material into containers and close for disposal.
- Ensure adequate ventilation during cleanup.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

- Do not breathe dust.
- Have safety shower and eye wash available.
- Do not get in eyes, on skin or on clothing.
- Use only in a chemical fume hood.

7.2. Storage

- Keep container tightly closed.
- Store at ambient temperature in a dry and well-ventilated place.
- Ensure adequate ventilation during use.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits Values

Chemical name	STEL (ppm)	NIOSH	OSHA	ACGIH
6-Methyl-5-nitropyridin-2-ol	None available	None available	None available	None available

Exposure Limits (International):

- Not available.

8.2. Exposure controls

Appropriate Engineering Controls:

- Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.3. Personal Protection

- **Eye/face protection:** Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- **Skin protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.
- **Body Protection:** Impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- **Respiratory protection:** For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

General Hygiene and general comments:

- Wash hands and face after working with the substance.
- Under no circumstances eat or drink at the workplace.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

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

Sr.No.	Parameter	Typical value
1.	Appearance	Light yellow crystal
2.	Molecular weight	154.12
3.	Molar Volume	109.204 cm^3
4.	Refractive index	1.605
5.	Odor	Not Available
6.	Odor Threshold	Not Available

7.	pH	Not Available
8.	Melting point	230-232 °C
9.	Boiling Point	390.831 °C at 760 mmHg
10.	Flash point	~151 °C
11.	Evaporation rate (n-BuAc=1)	Not Available
12.	Flammability	Non- flammable
13.	Upper/lower flammability or Explosive limits	Not Available
14.	Vapor pressure	0 mmHg at 25°C
15.	Vapor density (air=1)	Not Available
16.	Relative density	1.36
17.	Solubility	Not Available
18.	Partition coefficient : n-(Octonol / water)	-0.52 (KOWWIN v1.67 estimate)
19.	Auto-ignition temperature	Not Available
20.	Decomposition temperature	Not Available
21.	Viscosity	Not Applicable
22.	Explosive property	No

SECTION 10: STABILITY AND REACTIVITY

- **Stability:** Stable under recommended storage conditions.
- **Conditions to avoid:** Not available.
- **Incompatible chemicals:** Strong oxidizing agents, Strong acids and bases.
- **Hazardous decomposition products:** Thermal decomposition may produce Carbon monoxide, carbon dioxide and oxides of nitrogen. Emits toxic fumes under fire conditions.
- **Hazardous Polymerization**: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

- No data available.

RTECS#: Unlisted

LD50/LC50: Not available

Skin corrosion/irritation	:	Causes skin irritation.
Eye damage/irritation	:	Causes eye irritation.
Respiratory or skin sensitization	:	No data available.
Germ cell Mutagenicity	:	No data Available
Carcinogenicity	:	No classification data on carcinogenic properties of this material is available from EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity	:	No effects known.
STOT-single exposure	:	May cause irritation to respiratory system.
STOT- repeated exposure	:	No data available.
Aspiration Hazards	:	No data available.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

- No data available.

12.2. Persistence and degradability

- No data available.

12.3. Bio accumulative potential

6-Methyl-5-nitropyridin-2-ol (28489-45-4)	
Bio concentration factor	3.162 (Estimated)
Log Kow	-0.52 (Estimated) (KOWWIN v1.67 estimate)

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 relative to its surroundings.

12.4. Mobility in soil

6-Methyl-5-nitropyridin-2-ol (28489-45-4)	
Log Koc	1.773 (estimated). Low sorption.
Henry's Law constant	2.24 $X10^{-11}$ atm-m^3/ mole (Bond Method).
Log Kow	-0.52 (estimated). Low potential to bio accumulate.

12.5. 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 expected to be volatile from aqueous 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

13.1. Waste treatment methods

- Dissolve or mix the material with a combustible solvent and burn in a requlated, chemical incinerator equipped with after burner 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 reinstates.

SECTION 14: TRANSPORT INFORMATION

- This substance is not considered to be Hazardous for transport by Air/Rail/Road and Sea and thus not regulated by IATA/ICAO/ARD/RID/IMO/IMDG.

SECTION 15: REGULATORY INFORMATION

Classification as per GHS HazCom 2012:

- **Hazards Class and Category:** Skin Irrit.cat.2, Eye irrit.cat.2A, STOT SE cat 3
- **Hazard Statements:** H315; H319; H335

Chemical Inventory Lists:	Status
TSCA:	Not listed
EC/ List No.	Not listed
Canada(DSL/NDSL):	Not listed
Korea:	Not listed
Australia:	Not listed
Taiwan	Listed in Taiwan Chemical Substance Inventory (TCSI)
New Zealand	Not listed
Philippines	Not listed
China: IECSC	Not listed

US information

- **TSCA**
  CAS# 28489-45-4 is not listed on the Toxic Substances Control Act Inventory (TSCA) inventory.

- **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**
  It is not considered highly hazardous by OSHA.

- **CANADA-DSL/NDSL**
  The substance is not specified in DSL/NDSL.

- **California Prop 65**
  California No Significant Risk Level: This product is not listed.

SECTION 16: OTHER INFORMATION

a) Compilation information of safety data sheet

Date of compilation	: October 22, 2016
Chemical	: 6-Methyl-5-nitropyridin-2-ol
CAS #	: 28489-45-4
File Name	: 0797Gj Ghs04 Div.5 sds 6-Methyl-5-nitropyridin-2-ol
Revision Number	: 04
Date of Issue of SDS	: April 02, 2024
Revision Due Date	: March, 2027
Supersedes date	: March 01, 2021

b) 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.
- 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.
- SARA= Superfund Amendments and Reauthorization Act.
- WHIMS= Workplace Hazardous Materials Information System.
- DSL/NDSL= Domestic/Non-Domestic Substances List.
- BCF = Bio Concentration Factor.
- 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 European relative au transport international de merchandises.
- 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)