

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

**Product Identification:** 4-Methylpiperidine 0182Gj Ghs06 Div.3 sds 4-Methylpiperidine

Date of issue: March 26, 2024

Date of Compilation	: October 08, 2013
Date of Revision	: March 26, 2024
Revision due date	: February 2027
Revision Number	: 06
Version Number	: 0182Gj Ghs06 Div.3 sds 4-Methylpiperidine
Supersedes date	: January 02, 2024
Supersedes version	: 0182Gj Ghs05 Div.3 sds 4-Methylpiperidine



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# SECTION 1.: IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY

1.1 Product identification: 4-Methylpiperidine; CAS RN: 626-58-4; EC#: 210-954-1

- 1.1.1. Trade name: 4-Methylpiperidine
- 1.1.2. Systematic Name: 4-Methylpiperidine
- 1.1.3. Synonyms: 4-Pipecoline; g-Pipecoline
- 1.1.4. Other Languages:De: 4-MethylpiperidinEs: 4-metilpiperidinaFr: 4-méthylpipéridine
- 1.1.5 Molecular Formula: C<sub>6</sub>H<sub>13</sub>N



1.2 **Identified uses:** 4-Methylpiperidine is a new chemical entity which is used for research and development purposes only. It is probably used as an intermediate in the pharmaceutical industry.

Uses advised against: None

1.3 Company / supplier: FACTORY & REGISTERED OFFICE:

Jubilant Ingrevia Limited Bhartiagram, Gajraula District: Amroha Uttar Pradesh-244223, India PHONE NO: +91-5924-267437, +91-5924-267438

# HEAD OFFICE:

Jubilant Ingrevia Limited Plot 1-A, Sector 16-A, Institutional Area, Noida,

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Uttar Pradesh-201301 India. PHONE NO: +91-120-4361000 FAX NO : +91-120-4234881 / 84 / 85 / 87 / 95 / 96 Email: <u>support@jubl.com</u> Website: <u>www.jubilantingrevia.com</u>

#### **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

# 2.1.1. <u>Classification according to GHS US Classification</u>

Flammable Liquid: Category 2	H225
Acute Toxicity (Oral): Category 4	H302
Skin corrosion/irritation: Category 1A	H314

# 2.2 Label elements



Pictograms:

GHS 02-Flammable

GHS 05-Corrosive

Signal word: Danger!

# Hazard and precautionary statements:

# **Hazard Statements**

• H225: Highly flammable liquid and vapor.



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- H302: Harmful if swallowed
- H314: Causes severe skin burns and eye damage.

# **PRECAUTIONARY STATEMENTS**

- P210: Keep away from heat/sparks/open flame/hot surfaces- No smoking.
- P240: Ground/bond container and receiving equipment.
- P241: Use explosion-proof electrical/ventilating/ lighting/equipment.
- P242: Use only non- sparking tools.
- P243: Take precautionary measures against static discharge.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P264: Wash hands thoroughly after handling.
- P260: Do not breathe dust/fume/gas/mist/vapors/spray.
- P270: Do not eat drink or smoke when using this product.
- P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P301+P330+P331: Rinse mouth. Do NOT induce vomiting.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P303+P361+P331: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P370+P378: In case of fire: Use water for extinction.
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes .Remove Contact lenses, if present and easy to do. Continue rinsing.
- P332+P337+P313: If eye/skin irritation persists: Get medical advice/attention.
- P362: Take off contaminated clothing and before reuse.
- P304+P340: 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.
- 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.

# 2.3 Other Hazards

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

# **SECTION 3:**

# **COMPOSITION / INFORMATION ON INGERDIENTS**

Substance	CAS	EINECS	Purity	GHS US Classification		
	No.	No.		Hazard Classes and categories	Pictograms Signal Words	Hazard Statement



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4-M	ethylpiperidine	626-58-4	210-954-1	≥98.5 %	Flammable Liquid:	GHS02	H225
					Category 2	GHS 05	H302
					Acute Toxicity (Oral):	$\wedge$	H314
					Category 4	SHE S	
					Skin corrosion/irritation:		
					Category 1A		
						J. J.	

# **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.
- **Ingestion**: If swallowed call a poison center if you feel unwell. Rinse mouth. Do NOT induce vomiting by use of emetics. Seek medical attention.

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

- Acute effects:
  - Irritation and corrosion, Cough, Shortness of breath, Risk of blindness!
- *Chronic effects:* To the best of our knowledge chronic effects of this compound have not been fully investigated.

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

• No information available.

**SECTION 5 :** 

#### FIRE-FIGHTING MEASURES

# 5.1. Extinguishing media.



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- *Appropriate extinguishing media*: Dry chemical powder, carbon dioxide, Chemical 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 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.
- *Unsuitable extinguishing media*: For this substance/mixture no limitations of extinguishing agents are given.

# 5.2. Special hazards arising from the substance or mixture.

- Vapours are heavier than air and may spread along floors.
- Forms explosive mixtures with air at ambient temperatures.Pay attention to flashback.
- Development of hazardous combustion gases or vapours possible in the event of fire.
- Fire may cause evolution of: nitrogen oxides, Carbon oxides, Carbon monoxide.

# **5.3.** Advice for firefighters.

- 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).
- Chemical is water-soluble. Report any run-off of firewater's contaminated with this chemical as per local and federal procedures applicable.

# **SECTION 6 :**

# ACCIDENTAL RELEASE MEASURES

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

# 6.1.1 For non-emergency personnel

- 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.
- Use non-sparking tools.
- 6.1.2 For emergency personnel
  - Wear protective clothing, full boots, impervious gloves, safety glasses and Self Contained Breathing Apparatus (SCBA), as may be deemed appropriate.
  - Alert Emergency Responders and tell them location and nature of hazard.
  - Shut off all possible sources of ignition and increase ventilation.
  - Stop leaks if possible.



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- Clean up all spills immediately following relevant Standard Operating Procedures.
- Avoid breathing vapors and contact with skin and eyes.

# 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.
- Keep away from heat/sparks/open flame/hot surfaces. -No smoking.
- Take measures to prevent the buildup of electrostatic charge.
- Use explosion-proof equipment.

# 7.2. Conditions for safe storage, including any incompatibilities

- Store at ambient temperature in a dry and ventilated place away from heat, flame and sparks.
- Store in a flame proof area.
- Store away from incompatible materials.



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• Keep securely closed when not in use, Air sensitive.

# 7.3. Specific end use(s)

• 4-Methylpiperidine is a new chemical entity which is used for research and development purposes only. It is probably used as an intermediate in the pharmaceutical industry.

#### SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

#### 8.1. Control parameters

#### **8.1.1 Exposure Limits Values**

Chemical name	STEL (ppm)	NIOSH	ACGIH	OSHA
4-Methylpiperidine	None	None	None	None
	available	available	available	available

### 8.1.2Exposure Limits (International):

• Not available.

# 8.1.3 Derived No-Effect-Levels (DNEL) / Predicted No-effect-concentration (PNEC)

• DNEL and PNEC data not available.

#### 8.2. Exposure controls

# 8.2.1 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.

#### **8.2.2. 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.

#### General Hygiene and general comments:

- Wash hands and face after working with substance.
- Immediately change contaminated clothing.

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### SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

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

Sr.No.	Parameter	Typical value
1.	Appearance	Clear colorless to pale yellow liquid
2.	Odor	Characteristic Amine like odor
3.	Odor Threshold	Not available
4.	рН	Not Available
5.	Melting point/Freezing point	4-5 °C
6.	Boiling Point	130°C at 1 bar
7.	Flash point	7 <sup>0</sup> C
8.	Evaporation rate (n-BuAc=1)	Not available
9.	Flammability	Highly Flammable
10.	Upper/lower flammability or Explosive limits	Not available
11.	Vapor pressure	16 hPa at 20°C
12.	Vapor density (air=1)	Not available
13.	Relative density	0,838 g/cm3 at 25 °C
14.	Solubility	Miscible with water 47.2 g/L
15.	Partition coefficient : n- (Octonol / water)	1.61

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16.	Auto-ignition temperature	Not available
17.	Decomposition temperature	Not available
18.	Viscosity	Not available
19.	Explosive property	Not available
20.	Oxidizing property	No

#### SECTION 10:

#### STABILITY AND REACTIVITY

#### 10.1. Reactivity

• No data available.

#### **10.2.** Chemical stability

• Stable under normal conditions temperature and pressures.

#### 10.3. Possibility of hazardous reactions

• Hazardous Polymerization: Will not occur.

#### **10.4.** Conditions to avoid

• Keep away from High temperature, mechanical shock, incompatible materials, ignition sources, flame, excess heat, and high humidity.

#### **10.5. Incompatible materials**

• Oxidizing agents, Strong Bases.

#### **10.6. Hazardous decomposition products**

• Thermal decomposition may produce carbon monoxide and oxides of nitrogen, carbon dioxide & irritating and toxic fumes.

#### SECTION 11:

# TOXICOLOGICAL INFORMATION

#### **11.1. Information on toxicological effects**

#### a) Acute toxicity

- It causes severe skin burns and eye damage. On ingestion, burning sensation occurs ,Harmful if swallowed.
- **RTECS**#: Not available.
- LD50 (Oral)Rat : 973.14 mg/kg (Predicted Oral rat LD50 for 626-58-4 from Consensus method)
  - b) Skin corrosion/irritation
    - Causes severe skin burns.
  - c) Serious eye damage/irritation

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- Causes serious eye damage.
- d) Respiratory or skin sensitization
  - No data is available.
- e) Germ cell Mutagenicity
  - No data is available.
- f) Carcinogenicity
  - Not listed by NTP, IARC and OSHA.
  - Not present on the EU CMR list.
  - According to the information presently available 4-Methylpiperidine has not been tested for its ability to cause cancer in animals.
- g) Reproductive toxicity
  - According to the information presently 4-Methylpiperidine has not been tested for its ability to affect reproduction.
- h) STOT-single exposure
  - No data available.
- i) STOT- repeated exposure
  - No data available.
- j) Aspiration Hazards
  - No data available.

# **SECTION 12:**

# **ECOLOGICAL INFORMATION**

12.1. Toxicity

# 12.1.1 Ecotoxicity:

- Fathead minnow LC<sub>50</sub> (96 hr): 365.81 mg/L (Predicted Fathead minnow LC50 (96 hr) from Consensus method)
- Daphnia magna LC<sub>50</sub> (48 hr) : 36.84 mg/L (Predicted Daphnia magna LC50 (48 hr) from Consensus method

# 12.2. Persistence and degradability

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

# 12.3. Bio accumulative potential

- Estimated Log BCF = 0.73 (BCF = 5.33 L/kg wet-wt)
- BCF<500: No bioconcentration expected

Based on the Log Kow and Bioconcentration factor values, it is expected to have low potential to concentrate in fatty tissue of fish and aquatic organisms.

# 12.4. Mobility in soil (Estimated)

• Estimated Koc from MCI: 87.71 L/kg

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- Estimated Koc from Log Kow: 59.17 L/kg
- Estimated accumulative potential in soil and in sediments: Low (coefficient Koc: between 50 and 150 L/kg
- Log Koc = 2.17. Low Sorption.
- Henry's Law Constant =  $7.22 \times 10^{-06} \text{ atm/m}^3$  mole at 25 degrees. It is volatile from aqueous bodies.
- Log Kow = 1.61. Low potential to bioaccumulate.

# 12.5. Results of PBT and vPvB assessment

• The substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII.

# 12.6. Other adverse effects.

• Environment Fate:

Based on the environmental modeling, this material is expected to have 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**

# 13.1. Waste treatment methods

- Burn in a chemical incinerator equipped with an afterburner and scrubber.
- Exert extra care in igniting, as this material is highly flammable.
- 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/ARD/RID/IMO/IMDG.

Mode of Transport	Agency
Land transport	ADR/RID
Maritime Transport	IMDG
Air Transport	IATA

#### 14.1. UN number

- UN 2924
- **14.2. UN proper shipping name**

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# • FLAMMABLE LIQUID, CORROSIVE, N.O.S. (4-methylpiperidine)

# 14.3. Transport hazard class (es)

- Flammable class 3.
- Corrosive class 8
- Hazard Label.

# 14.4. Packing group

• II.

#### 14.5. Environmental hazards

• Marine pollutant: No.

#### **SECTION 15:**

# **REGULATORY INFORMATION**

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture.

• European/International Regulations.

# Classification (as per Regulation (EC) No 1272/2008):

- Hazards Class and Category: Flam. Liq. Cat.2, Acute tox (Oral). Cat 4, Skin corr. Cat.1A
- Hazard Statements: *H225; H302; H314*

Chemical Inventory Lists:	Status
TSCA:	Listed
EINECS:	210-954-1
Canada(DSL/NDSL):	Listed (NDSL)
Japan:	Listed
Korea:	Not Listed
Australian Inventory of Industrial Chemicals (AIIC)	Listed
China: IECSC	Not Listed
Catalog of Hazardous Chemicals in China (2022)	Listed
Chemical Substance Inventory in Taiwan, China (TCSI)	Listed





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Listed
Listed

# **US information**

# **US information**

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

4-Methylpiperidine is not listed

SARA 302/304: 4-Methylpiperidine is not listed

SARA 311/312: See section 2 for more information

California Prop. 65: 4-Methylpiperidine is not listed

CAA (Clean Air Act): 4-Methylpiperidine is not listed

CWA (Clean Water Act): 4-Methylpiperidine is not listed

# **EU Information**

Water hazard class (WGK): WGK 3 (Severely hazardous to water)

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

# **SECTION 16:**

# **OTHER INFORMATION**

(a) Compilation information of safety data sheet Chemical: 4-Methylpiperidine
CAS #: 626-58-4
File Name: 0182Gj Ghs06 Div.3 sds 4-Methylpiperidine
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(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

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- 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 = Threshhold Limit Value •
- ACGIH = American Conference of Governmental Industrial Hygienists •
- REACH = Registration, Evaluation .Authorisation and Restriction of Chemicals •
- CLP = Classification, Labelling 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

# Internet

- ESIS
- (d) List of Hazard statements



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Hazards Statements	<ul> <li>H225: Highly flammable liquid and vapor.</li> <li>H302: Harmful if swallowed</li> <li>H314: Causes severe skin burns and eye damage.</li> </ul>
	• H314: Causes severe skin burns and eye damage.

# **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)