



MATERIAL SAFETY DATA SHEET

Version Number:- 02

PRODUCT NAME: 4-DIMETHYLAMINOPYRIDINE (DMAP)

CAS Number: 1122-58-3

1. IDENTIFICATION:

Product Code : 92060

Company Name : ADVENT CHEMBIO PRIVATE LIMITED

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2. HAZARDS IDENTIFICATION:**Hazard classification****Health hazards**

Acute toxicity : Category 3 (Toxic if swallowed)

Acute toxicity : Category 3 (Toxic if inhaled)

Acute toxicity : Category 2 (Fatal in contact with skin)

Skin irritation : Category 2 (Causes skin irritation)

Serious eye damage : Category 1 (Causes serious eye damage)

Specific target organ toxicity - single exposure, Nervous system : Category 1 (Causes damage to organs)

Long-term (chronic) aquatic hazard : Category 2 (Toxic to aquatic life with long lasting effects)

Labels elements**Hazard symbol****Signal word****Hazard statement**

Danger

Toxic if swallowed or if inhaled.
Fatal in contact with skin.
Causes skin irritation.
Causes serious eye damage.
Causes damage to organs (Nervous system).
Toxic to aquatic life with long lasting effects.



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Precautionary statement

- Prevention** : Obtain special instructions before use.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
Keep container tightly closed. Use only non-sparking tools. Take precautionary measures against static discharge.
- Response** : IF exposed or concerned: Get medical advice/ attention.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF SWALLOWED: Immediately call a poison center or doctor/physician.
- Storage** : Store in a dry & well-ventilated place. Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Disposal** : Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
- Other hazards which do not result in GHS classification** : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

3. COMPOSITION/ INFORMATION ON INGREDIENTS:

Ingredient	CAS Number	Percent	Hazardous
4-Dimethylaminopyridine (DMAP)	1122-58-3	NLT 99.0%	Yes

4. FIRST AID MEASURES:

- General information** : Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
- Ingestion** : Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting.
If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Move to fresh air. Call a physician or poison control center immediately. If breathing stops,
- Inhalation** : provide artificial respiration. If breathing is difficult, give oxygen.
Get medical attention if symptoms persist.



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Skin contact	:	Immediately flush with plenty of water for at least 15 minutes. Get medical attention.
Eye contact	:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
If swallowed	:	Give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible.
Most important symptoms/effects, acute and delayed	:	The most important known symptoms and effects are described in the labelling.
Indication of immediate medical attention and special treatment needed	:	No data available.

5. FIRE FIGHTING MEASURES:**General information****Suitable (and unsuitable) extinguishing media**

Suitable extinguishing media	:	Water spray, foam, dry powder or carbon dioxide.
Unsuitable extinguishing media	:	For this substance/mixture no limitations of extinguishing agents are given.
Specific hazards arising from the chemical	:	Carbon oxides, Nitrogen oxides (NO _x), Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

Special protective equipment and precautions for firefighters

Special firefighting procedures	:	Fight fire from a protected location. Move containers from fire area if you can do so without risk.
Special protective equipment for fire-fighters	:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. ACCIDENTAL RELEASE MEASURES:

Personal precautions, protective equipment and emergency procedures	:	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid breathing mists or vapors. Keep upwind. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.
Methods and material for containment and cleaning up	:	Eliminate all ignition sources if safe to do so. Use only non-sparking tools. Take precautionary measures against static discharges. Stop leak if possible without any risk.
Notification Procedures	:	Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.
Environmental precautions	:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.



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7. HANDLING AND STORAGE:

Precautions for safe handling	Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Wear protective gloves/protective clothing/eye protection/ face protection. Avoid contact with eyes, skin, and clothing. Do not breathe mist or vapor. Use only with adequate ventilation. Wash hands thoroughly after handling.
Conditions for safe storage, including any incompatibilities	Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a dry, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks.

8. EXPOSURE CONTROLS PERSONAL PROTECTION:

Appropriate engineering controls	: No data available
Individual protection measures, such as personal protective equipment	
General information	: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.
Eye/face protection	: Wear safety glasses with side shields (or goggles).
Hand protection	: Chemical resistant gloves.
Other	: Wear suitable protective clothing.
Respiratory protection	: Required when dusts are generated. Recommended Filter type: Filter type P3
Hygiene measures	: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower. Avoid contact with eyes, skin, and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance	: White to off-white crystalline solid.
Odor	: No data available
Solubility	: No data available
Formula	: C ₇ H ₁₀ N ₂
Molecular Weight	: 122.17 g/mol
Density	: No data available



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pH	: 10.23 at 0,1 g/l at 22 °C
% Volatiles by volume @ 21C (70F)	: No data available
Boiling Point	: 162°C
Melting Point	: 111.0 - 114.0 °C
Flash Point	: 124 °C
Vapor Density (Air=1)	: No data available
Vapor Pressure (mm Hg)	: No data available
Evaporation Rate (BuAc=1)	: No data available

10. STABILITY AND REACTIVITY:

Reactivity	: Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical. The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.
Chemical stability	: Material is stable under ambient conditions..
Possibility of hazardous reactions	: Violent reactions possible with: Strong oxidizing agents, acids Caution In contact with nitrites, nitrates, nitrous acid possible liberation of nitrosamines.
Conditions to avoid	: Strong heating
Incompatible materials	: No data available
Hazardous decomposition products	: In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION:

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product	: LD 50 Oral - Rat - male - 140 mg/kg
Dermal Product	: LD 50 Dermal - Rabbit - male and female - 90 mg/kg
Inhalation Product	: LC 50 Inhalation - Rat - 4 h - 0,53 mg/l - dust/mist
Repeated dose toxicity Product	: No data available.
Skin corrosion/irritation Product	: No data available.
Serious eye damage/eye irritation Product	: Eyes - Rabbit Result: Corrosive
Respiratory or skin sensitization Product	: Buehler Test - Guinea pig Result: negative



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Carcinogenicity Product	: No data available
Germ cell mutagenicity	Test Type: Ames test Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: US-EPA Result: negative
	: Test Type: In vitro mammalian cell gene mutation test Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Result: negative Remarks: (ECHA)
Reproductive toxicity Product	: No data available
Specific target organ toxicity - single exposure Product	: Causes damage to organs. - Nervous system
Specific target organ toxicity - repeated exposure Product	: No data available
Aspiration hazard Product	: No data available
Other effects	: None known.

12. ECOLOGICAL INFORMATION:**Ecotoxicity****Acute hazards to the aquatic environment**

Fish Product	: semi-static test LC 50 - Danio rerio (zebra fish) – 11.6 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	: static test LC 50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h
Toxicity to algae	: static test Er C50 - Pseudokirchneriella subcapitata - 4,22 mg/l - 72 h
Toxicity to bacteria	: static test IC 50 - Tetrahymena pyriformis - 527,09 mg/l - 60 h

Chronic hazards to the aquatic environment

Fish Product	: No data available.
Aquatic invertebrates Product	: No data available.
Toxicity to Aquatic Plants Product:	: No data available.
Persistence and degradability	
Biodegradation Product	aerobic - Exposure time 28 d Result: 0 % - Not readily biodegradable.



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BOD/COD ratio Product : No data available.**Bioaccumulative potential****Bioconcentration factor (BCF) Product** : No data available on bioaccumulation.**Partition coefficient n-octanol / water (log Kow) Product** : No data available.**Mobility in soil** : The product is partly soluble in water. May spread in the aquatic environment.**Other adverse effects** : Discharge into the environment must be avoided.**13. DISPOSAL CONSIDERATION:****Disposal instructions** : Discharge, treatment, or disposal may be subject to national, state, or local laws. Disposal recommendations are based on uncontaminated material.**Contaminated packaging** : Since emptied containers retain product residue, follow label warnings even after container is emptied.**14. TRANSPORT INFORMATION:**

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Environmental hazards
ADR/RID	UN 2811	4-Dimethylaminopyridine (DMAP)	6.1	II	Yes
IMDG	UN 2811	4-Dimethylaminopyridine (DMAP)	6.1	II	Yes
IATA	UN 2811	4-Dimethylaminopyridine (DMAP)	6.1	II	No

15. REGULATORY INFORMATION:

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

No Data Available.

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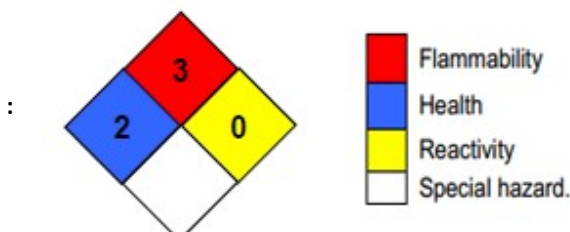
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16. OTHER INFORMATION:

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

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