

# SAFETY DATA SHEETS

According to the UN GHS revision 10

Version: 1.1  
Creation Date: July 15, 2024  
Revision Date: March 22, 2025

## SECTION 1: Identification

### 1.1 GHS Product identifier

Product name 3-(Dimethylamino)propionitrile

### 1.2 Other means of identification

Product number C1378124  
Other names -

### 1.3 Recommended use of the chemical and restrictions on use

Identified uses For laboratory and Industrial use only.  
Uses advised against no data available

### 1.4 Supplier's details

Company CATO Research Chemicals Inc.  
Address 3/F,Building B,No.179 BASIGO, Guangpu Rd East,Huangpu Dist,Guangzhou  
Telephone +86-20-81960175

### 1.5 Emergency phone number

Emergency phone number +86-20-81960175  
Service hours 'Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Acute toxicity - Category 4, Oral  
Acute toxicity - Category 4, Dermal  
Specific target organ toxicity – repeated exposure, Category 2

### 2.2 GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Warning

Hazard statement(s)

H302 Harmful if swallowed  
H312 Harmful in contact with skin  
H319 Causes serious eye irritation  
H373 May cause damage to organs through prolonged or repeated exposure

Precautionary statement(s)

Prevention

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

Response

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P301+P317 IF SWALLOWED: Get medical help.  
P330 Rinse mouth.  
P302+P352 IF ON SKIN: Wash with plenty of water/...  
P317 Get medical help.  
P321 Specific treatment (see ... on this label).  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P319 Get medical help if you feel unwell.

Storage

none

Disposal

P501 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.

## 2.3 Other hazards which do not result in classification

no data available

# SECTION 3: Composition/information on ingredients

## 3.1 Substances

| Chemical name                  | Common names and synonyms    | CAS number | EC number | Concentration |
|--------------------------------|------------------------------|------------|-----------|---------------|
| 3-(Dimethylamino)propionitrile | 3-dimethylaminopropionitrile | 1738-25-6  | 217-090-4 | ≈ 99%         |

# SECTION 4: First-aid measures

## 4.1 Description of necessary first-aid measures

### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

## 4.2 Most important symptoms/effects, acute and delayed

Exposure Routes: inhalation, skin absorption, ingestion, skin and/or eye contact Symptoms: Irritation eyes, skin; urinary disturbance; neurological disorders; pins & needles in hands & feet; muscle weakness, lassitude (weakness, exhaustion), nausea, vomiting; decreased nerve conduction in lower legs Target Organs: Eyes, skin, central nervous system, urinary tract (NIOSH, 2016)

## 4.3 Indication of immediate medical attention and special treatment needed, if necessary

Basic treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency & assist ventilation if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Administer amyl nitrite ampules as per protocol & physician order . Monitor for shock & treat if necessary . Monitor for pulmonary edema & treat if necessary . Anticipate seizures & treat if necessary . For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport . Do not use emetics. For ingestion, rinse mouth & administer 5 ml/kg up to 200 ml of water for dilution if the patient can swallow, has a strong gag reflex, & does not drool . Cyanide and related compounds

# SECTION 5: Fire-fighting measures

## 5.1 Suitable extinguishing media

To fight fire, use foam, carbon dioxide, dry chemical.

## 5.2 Specific hazards arising from the chemical

no data available

## 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

# SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

## 6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

## 6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

# SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and

aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

## 7.2 Conditions for safe storage, including any incompatibilities

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

# SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

### Occupational Exposure limit values

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Component</b> | 3-dimethylaminopropionitrile                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>CAS No.</b>   | 1738-25-6                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                  | Exposures should be limited to as few workers as possible, while minimizing workplace exposure concentrations with effective work practices and engineering controls. Exposed workers should be carefully monitored for potential disorders of the nervous and genitourinary system. Although substitution is a possible control measure, alternatives to NIAX Catalyst ESN or its components should be evaluated with regard to possible adverse health effects. |

### Biological limit values

no data available

## 8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

## 8.3 Individual protection measures, such as personal protective equipment (PPE)

### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

### Skin protection

Wear fire/flammable resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. 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.

### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

### Thermal hazards

no data available

# SECTION 9: Physical and chemical properties and safety characteristics

|                                                                 |                                                                         |
|-----------------------------------------------------------------|-------------------------------------------------------------------------|
| <b>Physical state</b>                                           | Liquid.                                                                 |
| <b>Colour</b>                                                   | Colourless.                                                             |
| <b>Odour</b>                                                    | no data available                                                       |
| <b>Melting point/freezing point</b>                             | -44.2 °C.                                                               |
| <b>Boiling point or initial boiling point and boiling range</b> | 173 °C. Atm. press.: 1 013 hPa.                                         |
| <b>Flammability</b>                                             | Class IIIA Combustible Liquid: Fl.P. at or above 140°F and below 200°F. |
| <b>Lower and upper explosion limit/flammability limit</b>       | no data available                                                       |
| <b>Flash point</b>                                              | 64 °C. Atm. press.: 1 013.25 hPa.                                       |
| <b>Auto-ignition temperature</b>                                | 290 °C. Atm. press.: 1 013 hPa.                                         |
| <b>Decomposition temperature</b>                                | no data available                                                       |
| <b>pH</b>                                                       | no data available                                                       |
| <b>Kinematic viscosity</b>                                      | dynamic viscosity (in mPa s) = 1.4. Temperature: 20°C.                  |
| <b>Solubility</b>                                               | Miscible (NIOSH, 2016)                                                  |
| <b>Partition coefficient n-octanol/water</b>                    | log Pow = -0.45. Temperature: 25 °C.                                    |
| <b>Vapour pressure</b>                                          | 1.2 hPa. Temperature: 20 °C.                                            |
| <b>Density and/or relative density</b>                          | 0.86 g/cm³. Temperature: 24.7 °C.                                       |
| <b>Relative vapour density</b>                                  | 2.4 (Air= 1)                                                            |
| <b>Particle characteristics</b>                                 | no data available                                                       |

# SECTION 10: Stability and reactivity

## 10.1 Reactivity

No rapid reaction with air No rapid reaction with water

## 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

Flammable liquid when exposed to heat, flame, or oxidizers. DIMETHYLAMINOPROPIONITRILE is combustible but non-flammable (flash point > 140°F), reacts with oxidizing agents (Hazardous Chemicals Desk Reference, p. 426 (1987)). Reacts violently with  $\text{LiAlH}_4$ , a strong reducing agent. Emits toxic oxides of nitrogen and cyanide fumes when heated to decomposition.

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Oxidizers [Note: Emits toxic oxides of nitrogen and cyanide fumes when heated to decomposition].

### 10.6 Hazardous decomposition products

When heated to decomposition it emits highly toxic fumes of  $\text{NO}_x$  and  $\text{CN}$ -/nitrogen oxides and cyanides/.

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 - rat - ca. 1 290 mg/kg bw. Remarks: Original value: 1500  $\mu\text{L/kg}$ , calculated with a density of 0.86 g/mL.
- Inhalation: IHT (inhalation hazard test) - rat (male/female).
- Dermal: LD50 - rabbit (male) - 1 213 mg/kg bw.

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

no data available

### Reproductive toxicity

no data available

### STOT-single exposure

no data available

### STOT-repeated exposure

no data available

### Aspiration hazard

no data available

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## SECTION 12: Ecological information

### 12.1 Toxicity

- Toxicity to fish: LC50 - *Leuciscus idus* - 681.2 mg/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* - > 500 mg/L - 48 h.
- Toxicity to algae: EC50 - *Desmodesmus subspicatus* (previous name: *Scenedesmus subspicatus*) - > 500 mg/L - 72 h.
- Toxicity to microorganisms: EC10 - *Pseudomonas putida* - 3 432 mg/L - 17 h.

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

no data available

### 12.4 Mobility in soil

no data available

### 12.5 Other adverse effects

no data available

## SECTION 13: Disposal considerations

### 13.1 Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## SECTION 14: Transport information

### 14.1 UN Number

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.2 UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.3 Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.4 Packing group, if applicable

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.5 Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to IMO instruments

no data available

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations specific for the product in question

| Chemical name                                                            | Common names and synonyms    | CAS number | EC number   |
|--------------------------------------------------------------------------|------------------------------|------------|-------------|
| 3-dimethylaminopropionitrile                                             | 3-dimethylaminopropionitrile | 1738-25-6  | 217-090-4   |
| European Inventory of Existing Commercial Chemical Substances (EINECS)   |                              |            | Listed.     |
| EC Inventory                                                             |                              |            | Listed.     |
| United States Toxic Substances Control Act (TSCA) Inventory              |                              |            | Listed.     |
| China Catalog of Hazardous chemicals 2015                                |                              |            | Listed.     |
| New Zealand Inventory of Chemicals (NZIoC)                               |                              |            | Listed.     |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS)       |                              |            | Listed.     |
| Vietnam National Chemical Inventory                                      |                              |            | Listed.     |
| Chinese Chemical Inventory of Existing Chemical Substances (China IECSC) |                              |            | Listed.     |
| Korea Existing Chemicals List (KECL)                                     |                              |            | Not Listed. |

## SECTION 16: Other information

#### Information on revision

Creation Date July 15, 2024

Revision Date March 22, 2025

#### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

#### References

- IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

**Any questions regarding this SDS, Please send your inquiry to [info@cato-chem.com](mailto:info@cato-chem.com)**

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