

# SAFETY DATA SHEET

Creation Date 20-April-2010

Revision Date 22-December-2025

Revision Number 7

This safety data sheet was created pursuant to the requirements of: Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) - SOR 2022-272

## 1. Identification

**Product Name** 4-Dimethylaminobenzaldehyde

**Cat No. :** 36684

**CAS-No** 100-10-7  
**Synonyms** Ehrlich's Reagent

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

### Details of the supplier of the safety data sheet

#### Company

##### **Importer/Distributor**

Fisher Scientific  
112 Colonnade Road,  
Ottawa, ON K2E 7L6,  
Canada  
Tel: 1-800-234-7437

##### **Emergency Telephone Number**

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
**Emergency Number US:**001-201-796-7100 / **Europe:** +32 14 57 52 99  
**CHEMTREC** Tel. No. **US:**001-800-424-9300 / **Europe:**001-703-527-3887

## 2. Hazard(s) identification

### Classification

#### **WHMIS 2015 Classification**

This product is not considered hazardous in accordance with the Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended (SOR/2022-272)

Based on available data, the classification criteria are not met

### Label Elements

None required

### **Hazard Statements**

### **Precautionary Statements**

#### **Other Hazards**

Light sensitive

### 3. Composition/Information on Ingredients

| Component                        | CAS-No   | Weight % |
|----------------------------------|----------|----------|
| Benzaldehyde, 4-(dimethylamino)- | 100-10-7 | <=100    |

### 4. First-aid measures

|                                        |                                                                                                                   |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>General Advice</b>                  | If symptoms persist, call a physician.                                                                            |
| <b>Eye Contact</b>                     | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.   |
| <b>Skin Contact</b>                    | Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. |
| <b>Inhalation</b>                      | Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.      |
| <b>Ingestion</b>                       | Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.             |
| <b>Most important symptoms/effects</b> | None reasonably foreseeable.                                                                                      |
| <b>Notes to Physician</b>              | Treat symptomatically                                                                                             |

### 5. Fire-fighting measures

|                                         |                                                                                       |
|-----------------------------------------|---------------------------------------------------------------------------------------|
| <b>Suitable Extinguishing Media</b>     | Water spray, carbon dioxide (CO <sub>2</sub> ), dry chemical, alcohol-resistant foam. |
| <b>Unsuitable Extinguishing Media</b>   | No information available                                                              |
| <b>Flash Point</b>                      | 164 °C / 327.2 °F                                                                     |
| <b>Method -</b>                         | No information available                                                              |
| <b>Autoignition Temperature</b>         | 445 °C / 833 °F                                                                       |
| <b>Explosion Limits</b>                 |                                                                                       |
| <b>Upper</b>                            | No data available                                                                     |
| <b>Lower</b>                            | No data available                                                                     |
| <b>Sensitivity to Mechanical Impact</b> | No information available                                                              |
| <b>Sensitivity to Static Discharge</b>  | No information available                                                              |

#### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

#### Hazardous Combustion Products

Nitrogen oxides (NO<sub>x</sub>). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### NFPA

**Health**  
2

**Flammability**  
1

**Instability**  
1

**Physical hazards**  
N/A

## 6. Accidental release measures

|                                             |                                                                                                              |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Personal Precautions</b>                 | Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.            |
| <b>Environmental Precautions</b>            | Should not be released into the environment. Do not flush into surface water or sanitary sewer system.       |
| <b>Methods for Containment and Clean Up</b> | Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal. |

## 7. Handling and storage

|                 |                                                                                                                                                                                     |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b> | Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Avoid dust formation. Do not get in eyes, on skin, or on clothing. |
| <b>Storage.</b> | Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from light. Incompatible Materials. Strong oxidizing agents. Strong bases.                         |

## 8. Exposure controls / personal protection

|                            |                                                                                                                                               |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Exposure Guidelines</b> | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engineering Measures</b> | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.<br>Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Personal protective equipment

|                        |                                                                                                                                                                             |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Protection</b>  | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. |
| <b>Hand Protection</b> | Wear appropriate protective gloves and clothing to prevent skin exposure.                                                                                                   |

| Glove material | Breakthrough time | Glove thickness | Glove comments         |
|----------------|-------------------|-----------------|------------------------|
| Nitrile rubber | See manufacturers | -               | Splash protection only |
| Neoprene       | recommendations   |                 |                        |
| Natural rubber |                   |                 |                        |
| PVC            |                   |                 |                        |

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

### **Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Recommended Filter type:** Particulates filter conforming to EN 143

When RPE is used a face piece Fit Test should be conducted

#### Environmental exposure controls

Prevent product from entering drains.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

## 9. Physical and chemical properties

#### Appearance

**Physical State**

Powder Solid

**Color**

Light yellow

**Odor**

Strong

**Odor Threshold**

No information available

#### Property

##### Values

##### Remarks

##### • Method

**Melting Point/Range**

70 - 75 °C / 158 - 167 °F

**Softening Point**

No data available

**Boiling Point/Range**

176 - 177 °C / 348.8 - 350.6 °F

@ 17 mmHg

**Flash Point**

164 °C / 327.2 °F

**Method -** No information available

**Flammability (liquid)**

Not applicable

Solid

**Flammability (solid,gas)**

No information available

**Explosion Limits**

No data available

**Autoignition Temperature**

445 °C / 833 °F

**Decomposition Temperature**

No data available

**pH**

Not applicable

**Viscosity**

Not applicable

Solid

**Water Solubility**

0.3 g/l (20°C)

practically insoluble

**Solubility in other solvents**

No information available

**Partition Coefficient (n-octanol/water)**

**Component**

**log Pow**

Benzaldehyde, 4-(dimethylamino)-

1.8

**Vapor Pressure**

No data available

**Density / Specific Gravity**

No data available

**Bulk Density**

No data available

**Vapor Density**

Not applicable

Solid

**Particle characteristics**

No data available

#### Other Information

**Molecular Formula**

C9 H11 N O

**Molecular Weight**

149.19

**Evaporation Rate**

Not applicable - Solid

## 10. Stability and reactivity

**Reactive Hazard**

None known, based on information available

**Stability**

Stable under normal conditions. Light sensitive.

**Conditions to Avoid**

Avoid dust formation. Incompatible products. Excess heat. Exposure to light.

**Incompatible Materials**

Strong oxidizing agents, Strong bases

**Hazardous Decomposition Products** Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Information on expected route of exposure

**Inhalation** Avoid breathing dust or spray mist.  
**Ingestion** No known effect based on information supplied.  
**Eyes** Not an expected route of exposure.  
**Skin** No known effect based on information supplied.

### Toxicology data for the components

| Component                        | LD50 Oral                                                      | LD50 Dermal | LC50 Inhalation |
|----------------------------------|----------------------------------------------------------------|-------------|-----------------|
| Benzaldehyde, 4-(dimethylamino)- | LD50 >2000 mg/kg (Rat) OECD TG 423<br>LD50 = 800 mg/kg (Mouse) | -           | -               |

**Toxicologically Synergistic Products** No information available

**(b) skin corrosion/irritation;** No data available

**(c) serious eye damage/irritation;** No data available

**(d) respiratory or skin sensitization;**

**Respiratory** No data available  
**Skin** No data available

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;**

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component                        | CAS-No   | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|----------------------------------|----------|------------|------------|------------|------------|------------|
| Benzaldehyde, 4-(dimethylamino)- | 100-10-7 | Not listed | Not listed | Not listed | Not listed | Not listed |

**(g) reproductive toxicity;** No data available

**(h) STOT-single exposure;** No data available

**(i) STOT-repeated exposure;** No data available

**Target Organs** None known.

**(j) aspiration hazard;** Not applicable  
Solid

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Symptoms / effects, both acute and delayed** No information available.

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

## 12. Ecological information

### Ecotoxicity

Contains a substance which is: Harmful to aquatic organisms. The product contains following substances which are hazardous for the environment.

| Component                        | Freshwater Algae                                              | Freshwater Fish                                                 | Microtox   | Water Flea                                   |
|----------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------|------------|----------------------------------------------|
| Benzaldehyde, 4-(dimethylamino)- | EC50 = 72.7 mg/l (72h)<br>Desmodesmus subspicatus<br>OECD 201 | LC50: = 45.7 mg/L, 96h<br>flow-through (Pimephales<br>promelas) | Not listed | EC50 = 1.58 mg/l (Daphnia)<br>48h (OCED 202) |

**Persistence and Degradability** Persistence is unlikely

**Bioaccumulation/ Accumulation** No information available.

**Mobility** . Is not likely mobile in the environment due its low water solubility.

| Component                        | log Pow |
|----------------------------------|---------|
| Benzaldehyde, 4-(dimethylamino)- | 1.8     |

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT** Not regulated  
**TDG** Not regulated  
**IATA** Not regulated  
**IMDG/IMO** Not regulated

## 15. Regulatory information

**All of the components in the product are on the following Inventory lists:** China X = listed Australia U.S.A. (TSCA) Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP) Australia (AICS) Korea (KECL) China (IECSC) Japan (ENCS) Philippines (PICCS) Taiwan (TCSI) Japan (ISHL) New Zealand (NZIoC) Japan (ISHL)

### International Inventories

| Component                        | CAS-No   | DSL | NDSL | TSCA | TSCA Inventory notification - Active-Inactive | EINECS    | ELINCS | NLP |
|----------------------------------|----------|-----|------|------|-----------------------------------------------|-----------|--------|-----|
| Benzaldehyde, 4-(dimethylamino)- | 100-10-7 | X   | -    | X    | ACTIVE                                        | 202-819-0 | -      | -   |

| Component                        | CAS-No   | IECSC | KECL     | ENCS | ISHL | TCSI | AICS | NZIoC | PICCS |
|----------------------------------|----------|-------|----------|------|------|------|------|-------|-------|
| Benzaldehyde, 4-(dimethylamino)- | 100-10-7 | X     | KE-11127 | X    | X    | X    | X    | X     | X     |

### Legend:

X - Listed '-' - Not listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances  
**IECSC** - Chinese Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**ENCS** - Japanese Existing and New Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

#### Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and its amendments and meets the requirements of the HPR (Paragraph 13(1)(a) of the revised Hazardous Products Act (HPA)).

#### Other International Regulations

**Authorisation/Restrictions according to EU REACH** Not applicable

#### Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

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

| Component                        | CAS-No   | OECD HPV       | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|----------------------------------|----------|----------------|------------------------------|---------------------------|--------------------------------------------|
| Benzaldehyde, 4-(dimethylamino)- | 100-10-7 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |

| Component                        | CAS-No   | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|----------------------------------|----------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------|------------------------------------|
| Benzaldehyde, 4-(dimethylamino)- | 100-10-7 | Not applicable                                                                            | Not applicable                                                                           | Not applicable             | Not applicable                     |

## 16. Other information

#### Prepared By

Product Safety Department  
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 www.thermofisher.com

#### Creation Date

20-April-2010

#### Revision Date

22-December-2025

#### Print Date

22-December-2025

#### Revision Summary

This document has been updated to comply with the requirements of WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) to align with the Globally Harmonised System (GHS) (V7/8) for the Classification and Labelling of Chemicals.

#### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**