

Classified as hazardous according to criteria of EPA New Zealand

Section 1 - Identification

Product Name p-Anisidine

Synonyms 4-Methoxyaniline; 4-Methoxybenzeneamine; 4-Aminoanisole

| | |
|--------------------------------|---|
| Product Code | MO08495ZZ; MO08495FL; MO08495R3 |
| Address | Thermo Fisher Scientific New Zealand Ltd 244 Bush Road, Albany, Auckland, New Zealand |
| Emergency Tel. | CHEMTREC® 09 980 6780 or +64 9 980 6780 |
| Telephone / Fax Numbers | Tel: 09 980 6700 Fax: 09 980 6788 |
| E-mail address | <u>NZinfo@thermofisher.com</u> |

Recommended Use Laboratory chemicals.

Section 2 - Hazard(s) Identification

Classification under Work Safe New Zealand

- 6.1B - Substances that are acutely toxic (Oral)
- 6.1A - Substances that are acutely toxic (Dermal)
- 6.1B - Substances that are acutely toxic (Inhalation)
- 6.7A - Substances that are known or presumed human carcinogens
- 6.9B - Substances that are harmful to human target organs or systems
- 9.1A - Substances that are very ecotoxic in the aquatic environment
- 9.3B - Substances that are ecotoxic to terrestrial vertebrates

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GHS Classification

Physical hazards

Based on available data, the classification criteria are not met

Health hazards

| | |
|--|-------------|
| Acute Oral Toxicity | Category 2 |
| Acute Dermal Toxicity | Category 1 |
| Acute Inhalation Toxicity - Dusts and Mists | Category 2 |
| Carcinogenicity | Category 1B |
| Specific target organ toxicity - (repeated exposure) | Category 2 |

Environmental hazards

| | |
|--------------------------|------------|
| Acute aquatic toxicity | Category 1 |
| Chronic aquatic toxicity | Category 1 |

Label Elements**Signal Word****Danger****Hazard Statements**

H300 - Fatal if swallowed
H310 - Fatal in contact with skin
H330 - Fatal if inhaled
H350 - May cause cancer
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H432 - Toxic to terrestrial vertebrates

Precautionary Statements

P201 - Obtain special instructions before use
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P262 - Do not get in eyes, on skin, or on clothing
P202 - Do not handle until all safety precautions have been read and understood
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P281 - Use personal protective equipment as required
P284 - Wear respiratory protection
P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water
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
P330 - Rinse mouth
P361 - Remove/Take off immediately all contaminated clothing
P363 - Wash contaminated clothing before reuse
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/ container to an approved waste disposal plant

Other information

No information available

Section 3 - Composition and Information on Ingredients

| Component | CAS-No | Weight % |
|-------------|----------|----------|
| o-Anisidine | 90-04-0 | 0.1-0.7 |
| p-Anisidine | 104-94-9 | >98.5 |

Section 4 - First Aid Measures

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

| | |
|--|--|
| Ingestion | Do NOT induce vomiting. Call a physician or poison control center immediately. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required. |
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. |
| General Advice | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. |
| Self-Protection of the First Aider | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. |
| First Aid Facilities | Eyewash, safety shower and washroom. |
| Most important symptoms and effects | None reasonably foreseeable. |
| Notes to Physician | Treat symptomatically. |

Section 5 - Fire Fighting Measures

Suitable Extinguishing Media

Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

No information available.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x).

Decomposition Temperature

> 300°C

Specific Hazards Arising from the Chemical

Do not allow run-off from fire-fighting to enter drains or water courses.

Special protective equipment and precautions for fire fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

Section 6 - Accidental Release Measures

Emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

Environmental Precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods for Containment and Clean Up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

Section 7 - Handling and Storage

Precautions for Safe Handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

Conditions for Safe Storage, Including any Incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Store under an inert atmosphere.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

Section 8 - Exposure Controls and Personal Protection

Exposure limits

NZ - Workplace Exposure Standards and Biological Exposure Indices (6th edition). New Zealand Department of Labor

| Component | New Zealand WEL |
|-------------|---|
| o-Anisidine | TWA: 0.1 ppm TWA: 0.50 mg/m ³ Skin |
| p-Anisidine | TWA: 0.1 ppm TWA: 0.50 mg/m ³ Skin |

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. 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

Eye Protection

Wear safety glasses with side shields (or goggles) (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

Hand Protection

Protective gloves

| Glove material | Breakthrough time | Glove thickness | AUS/NZ Standard | Glove comments |
|---|--------------------------------------|-----------------|-----------------|-----------------------|
| Nitrile rubber, Neoprene, Natural rubber, PVC. | See manufacturers recommendations | - | AS/NZS 2161 | (minimum requirement) |

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, 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.

Remove gloves with care avoiding skin contamination.

Skin and body protection

Long sleeved clothing

Respiratory Protection

Use an AS/NZS 1716 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 in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices

Recommended Filter type: Recommended half mask:-

Particulates filter conforming to EN 143 (or AUS/NZ equivalent)
Particle filtering: EN149:2001 (or AUS/NZ equivalent)
When RPE is used a face piece Fit Test should be conducted

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

| | | |
|--|-------------------------------|--|
| Appearance | Grey, Brown | |
| Physical State | Solid | |
| Odor | No information available | |
| Odor Threshold | No data available | |
| pH | 8.8 | 53 g/L aq.sol |
| Melting Point/Range | 56 - 59 °C / 132.8 - 138.2 °F | |
| Softening Point | No data available | |
| Boiling Point/Range | 240 - 243 °C / 464 - 469.4 °F | |
| Flash Point | 122 °C / 251.6 °F | Method - No information available |
| Evaporation Rate | Not applicable | Solid |
| Flammability (solid,gas) | No information available | |
| Explosion Limits | No data available | |
| Vapor Pressure | 0.02 hPa @ 20 °C | |
| Vapor Density | Not applicable | Solid |
| Specific Gravity / Density | 1.060 | |
| Bulk Density | No data available | |
| Water Solubility | Soluble | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/water) | | |
| Component | log Pow | |
| o-Anisidine | 1.18 | |
| p-Anisidine | 0.95 | |
| Autoignition Temperature | 450 °C / 842 °F | |
| Decomposition Temperature | > 300°C | |
| Viscosity | Not applicable | Solid |
| Explosive Properties | No information available | |
| Oxidizing Properties | No information available | |
| Other information | | |
| Molecular Formula | C7 H9 N O | |
| Molecular Weight | 123.15 | |

Section 10 - Stability and Reactivity

| | |
|---|---|
| Reactivity | None known, based on information available |
| Stability | Light sensitive. Air sensitive. |
| Conditions to Avoid | Incompatible products, Excess heat, Avoid dust formation, Exposure to air, Exposure to light. |
| Incompatible Materials | Strong oxidizing agents, Acids, Acid chlorides, Acid anhydrides, Chloroformates. |
| Hazardous Decomposition Products | Carbon monoxide (CO). Carbon dioxide (CO ₂). Nitrogen oxides (NO _x). |
| Hazardous Polymerization | Hazardous polymerization does not occur. |

Section 11 - Toxicological Information

Information on Toxicological Effects

Product Information

(a) acute toxicity;

Oral

Category 2

Dermal

Category 1

Inhalation

Category 2

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-------------|--|---------------------------|---|
| o-Anisidine | LD50 = 1890 mg/kg (Rat) LD50 = 1150 mg/kg (Rat) | LD50 > 2000 mg/kg (Rat) | LC50 > 3800 mg/m ³ (Rat) 4 h LC50 > 3.87 mg/L (Rat) 4 h |
| p-Anisidine | LD50 = 1400 mg/kg (Rat) LD50 = 1320 mg/kg (Rat) | LD50 = 3200 mg/kg (Rat) | |

(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

Sensitization

No information available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; Category 1B

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

| Component | Australia | New Zealand | New South Wales | Western Australia | IARC | EU | UK | Germany |
|-------------|-----------|----------------------|-----------------|-------------------|----------|--------------|----|---------|
| o-Anisidine | | Suspected carcinogen | | | Group 2B | Carc Cat. 1B | | Cat. 2 |
| p-Anisidine | | Suspected carcinogen | | | | | | Cat. 3B |

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; Category 2

Target Organs

None known.

(j) aspiration hazard;

Not applicable
Solid

Symptoms / effects, both acute and delayed No information available

Section 12 - Ecological Information

Ecotoxicity effects

Very toxic to aquatic organisms. The product contains following substances which are hazardous for the environment.

| Component | Freshwater Fish | Water Flea | Freshwater Algae | Microtox |
|-------------|--|--|------------------|-------------------------|
| o-Anisidine | LC50: > 100 mg/L, 96h static (Brachydanio rerio) | | | EC50 = 1500 mg/L 24 h |
| p-Anisidine | | EC50: = 0.18 mg/L, 48h (Daphnia magna) | | EC50 = 14.5 mg/L 30 min |

Persistence and Degradability**Persistence**

Soluble in water, Persistence is unlikely, based on information available.

Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Bioaccumulative Potential

Bioaccumulation is unlikely

Bioconcentration factor (BCF)

54

| Component | log Pow | Bioconcentration factor (BCF) |
|-------------|---------|-------------------------------|
| o-Anisidine | 1.18 | No data available |
| p-Anisidine | 0.95 | No data available |

Mobility

The product is water soluble, and may spread in water systems. . Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

Endocrine Disruptor Information
Persistent Organic Pollutant
Ozone Depletion Potential

This product does not contain any known or suspected endocrine disruptors

This product does not contain any known or suspected substance

This product does not contain any known or suspected substance

Section 13 - Disposal Considerations

Waste from Residues/Unused Products

Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.

Contaminated Packaging

Dispose of this container to hazardous or special waste collection point.

Other Information

Disposal agencies or waste contractors must comply with the New Zealand Hazardous Substances (Disposal) Regulations . Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not let this chemical enter the environment.

Section 14 - Transport Information

IMDG/IMO

UN-No UN2811

Proper Shipping Name Toxic solid, organic, n.o.s.

Hazard Class 6.1

Packing Group III

NZS 5433:2012

UN-No UN2811

Proper Shipping Name Toxic solid, organic, n.o.s.

Hazard Class 6.1

Packing Group III

IATA

UN-No UN2811
 Proper Shipping Name Toxic solid, organic, n.o.s.
 Hazard Class 6.1
 Packing Group III

Environmental hazards Dangerous for the environment
 Product is a marine pollutant according to the criteria set by IMDG/IMO

Special Precautions No special precautions required

Additional information None known

Section 15 - Regulatory Information

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

| Component | HSNO Approval Number |
|-------------|----------------------|
| o-Anisidine | HSR004606 |
| p-Anisidine | HSR004619 |

International Inventories X = listed

| Component | NZIoC | AICS | EINECS | ELINCS | TSCA | DSL | NDSL | PICCS | ENCS | IECSC | KECL |
|-------------|-------|------|-----------|--------|------|-----|------|-------|------|-------|----------|
| o-Anisidine | X | X | 201-963-1 | - | X | X | - | X | X | X | KE-23211 |
| p-Anisidine | X | X | 203-254-2 | - | X | X | - | X | X | X | KE-23212 |

Prohibition or notification/licensing requirements Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

| Component | New Zealand |
|-------------|----------------------|
| o-Anisidine | Suspected carcinogen |
| p-Anisidine | Suspected carcinogen |

Section 16 - Other Information

This safety data sheet complies with the requirements of WorkSafe New Zealand Regulations

Legend

AICS - Australian Inventory of Chemical Substances
 TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
 IECSC - Chinese Inventory of Existing Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 TWA - Time Weighted Average
 IARC - International Agency for Research on Cancer
 ICAO/IATA - International Civil Aviation Organization/International Air Transport Association
 MARPOL - International Convention for the Prevention of Pollution from Ships
 NZS 5433:2012 - Transport of Dangerous Goods on Land
 LD50 - Lethal Dose 50%
 EC50 - Effective Concentration 50%
 WEL - Workplace Exposure Limit
 DNEL - Derived No Effect Level
 POW - Partition coefficient Octanol:Water
 vPvB - very Persistent, very Bioaccumulative

NZIoC - New Zealand Inventory of Chemicals
 EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
 ENCS - Japanese Existing and New Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances
 CAS - Chemical Abstracts Service
 ACGIH - American Conference of Governmental Industrial Hygienists
 Predicted No Effect Concentration (PNEC)
 IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
 ADG Australian Code for the Transport of Dangerous Goods by Road and Rail
 OECD - Organisation for Economic Co-operation and Development
 LC50 - Lethal Concentration 50%
 ATE - Acute Toxicity Estimate
 RPE - Respiratory Protective Equipment
 NOEC - No Observed Effect Concentration
 54
 PBT - Persistent, Bioaccumulative, Toxic

VOC (volatile organic compound)

Key literature references and sources for data

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical incident response training.

Revision Date

11-Aug-2020

Revision Summary

Initial Release

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 Safety Data Sheet